

THE NUCLEAR NON-PROLIFERATION TREATY

ORIGIN AND IMPLEMENTATION
1959 - 1979

Volume I

by

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1980
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Ambassador Mohamed Ibrahim Shaker received his PhD from the Graduate Institute of International Studies at the University of Geneva and also holds the Licence en Droit (LLB) from Cairo University. Among his many diplomatic posts, he served as representative of the Director General of the International Atomic Energy Agency (IAEA) to the United Nations in New York, Deputy Representative of Egypt to the United Nations Security Council, Deputy Permanent Representative of Egypt to the United Nations, Egypt's Governor on the IAEA Board of Governors, and Ambassador of Egypt to the United Kingdom. Ambassador Shaker was the President of the 1985 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and was President of the United Nations Conference for the Promotion of International Cooperation in the Peaceful Uses of Nuclear Energy. He also served as a member of the UN Secretary General's Advisory Board on Disarmament Matters and the UN Expert Group on Disarmament and Nonproliferation Education. He currently is Chairman of the Egyptian Council for Foreign Affairs.

PREFACE

The Nuclear Nonproliferation Treaty: Origin and Implementation, 1959-1979 is widely regarded to be the definitive work about the negotiation and first decade of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). Unfortunately, this three-volume study has long been out of print, and it is unavailable even at many major research libraries. In order to remedy this situation and to make the study more accessible to scholars, students, and diplomats, the Egyptian Council for Foreign Affairs (ECFA) and the Monterey Institute Center for Nonproliferation Studies (CNS) have collaborated to produce an exact replica of the original work in compact disk (CD) format. It is our shared view that knowledge of the negotiating history of the NPT and the implementation of the treaty during its formative period remains vitally important today, at a time when the Treaty faces both new and continuing challenges.

It is especially important to recall and reflect upon this history given the greatly diminished institutional memory of the NPT in many countries. The value of such reflection was reinforced at the Workshop on the Institutional Memory of the NPT in Nyon, Switzerland in March 2010, which brought together four prior presidents of NPT Review Conferences to share their collective wisdom with the president-designate of the 2010 NPT Review Conference. It was during this discussion of lessons learned—both positive and negative—that the idea for creating a CD version of the original multi-volume book was conceived.

We are grateful to Oceana Publications for publishing the original study and to Oxford University Press, which subsequently acquired the rights to the book, for permission to produce this limited edition CD on the occasion of the 2010 NPT Review Conference. We also wish to thank Ms. Haidy Ghoneim, Ms. Gaukhar Mukhatzhanova, Mr. Nikita Perfilyev, and Mr. David Steiger for their assistance in the preparation of this CD. We very much hope that delegates to the 2010 conference and future conferences will find the analysis and documentation in the study to be of assistance in their negotiations, and encourage students of the NPT to make use of the work to advance scholarship on nonproliferation diplomacy.

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*To Mona
Shahira And Mahmoud*



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LIST OF ABBREVIATIONS

A:	General Assembly ¹
ABM:	Anti-ballistic missile
AC.:	Ad Hoc Committee ¹
ACDA:	United States Arms Control and Disarmament Agency
Add.:	Addendum ³
AEC:	Atomic Energy Commission
a.i.:	Agenda item (s)
ANF:	Atlantic Nuclear Force
Ann (s).:	Annex (es)
ASBM:	Air-to-surface ballistic missiles
C.1:	First Committee ¹
C.2:	Second Committee ¹
CCD:	Conference of the Committee on Disarmament ¹
CD:	Committee on Disarmament
CEA:	Commisariat à l' énergie atomique
CERN:	Conseil Européen pour la Recherche Nucléaire (now Organisation Européene pour la Recherche Nucléaire)
CIA:	U.S. Central Intelligence Agency
CIEN:	Inter-American Nuclear Energy Commission
COM.:	Committee ²
COMECON:	Council for Mutual Economic Assistance
CONF:	Conference ³
COPREDAL:	Comision Preparatoria para la Desnuclearizacion de la America Latina (Preparatory Commission for the Denuclearization of Latin America)
Corr.:	Correction
Cttee:	Committee
DC:	Disarmament Commission ¹
DCOR:	Disarmament Commission, Official Records
DOC. (Doc.):	Document
DOSB:	Department of State Bulletin
EAEC:	European Atomic Energy Community
ECSC:	European Coal and Steel Community
EDC:	European Defence Community
EEC:	European Economic Community
ENDC:	Conference of the Eighteen-Nation Committee on Disarmament ¹
ENEA:	European Nuclear Energy Agency
Euratom:	European Atomic Energy Community

¹ Abbreviations used in documents of United Nations organs or international conferences served by the United Nations Secretariat.

² Abbreviations used in documents of the International Atomic Energy Agency.

³ Abbreviations used in the documents referred to in 1 and 2.

Eurochemic:	European Company for the Chemical Processing of Irradiated Fuels
FAO:	Food and Agriculture Organisation
FRG:	Federal Republic of Germany
GA:	General Assembly
GAOR:	General Assembly, Official Records.
GC:	General Conference ²
GCD:	General and Complete Disarmament.
GDR:	German Democratic Republic
GOV:	Board of Governors ²
HMSO:	Her Majesty's Stationery Office
IAEA:	International Atomic Energy Agency
IBRD:	International Bank for Reconstruction and Development
ICBM:	Intercontinental ballistic missile
ICJ:	International Court of Justice
IEA:	International Energy Agency
IISS:	International Institute for Strategic Studies
INF:	Information ³
INFCE:	International Nuclear Fuel Cycle Evaluation
INFCIRC:	Information circular ¹
INIS:	International Nuclear Information System
IRBM:	Intermediate-range ballistic missile
ISS:	Institute for Strategic Studies
JCS:	Joint Chiefs of Staff
KMP:	Key measurement point
L.:	Limited Distribution/Draft (e.g., resolution or working paper) ¹
MARV:	Maneuverable re-entry vehicle
MBA:	Material balance area
MBFR:	Mutual and Balanced Force Reductions
MIRV:	Multiple, independently-targeted re-entry vehicle
MIT:	Massachusetts Institute of Technology
MLF:	Multilateral Nuclear Force
MRMB:	Medium-range ballistic missile
MRV:	Multiple re-entry vehicle
mtg:	Meeting
MUF:	Material unaccounted for
MW (e):	Megawatts (electrical)
MW (th):	Megawatts (thermal)
NATO:	North Atlantic Treaty Organisation
NEA:	Nuclear Energy Agency
NNWS:	Non-nuclear-weapon States
NPG:	Nuclear Planning Group
NPT:	Treaty on the Non-Proliferation of Nuclear Weapons.
NWS:	Nuclear-weapon States
OAS:	Organisation of American States

OAU:	Organisation of African Unity
OECD:	Organisation for Economic Co-operation and Development
OPANAL:	Organismo para la Proscripcion de las Armas Nucleares en la America Latina (Agency for the Prohibition of Nuclear Weapons in Latin America)
OR.:	Official Record (s) ²
PL:	Panel ²
plen.:	Plenary
PNE:	Peaceful nuclear explosions
prov.:	Provisional
Pu-:	Plutonium
PV.:	Procès-verbal (verbatim record). ¹
R&D:	Research and development
RES (Res.):	Resolution ¹
Rev.:	Revision ³
S:	Security Council ¹
SAC:	Strategic Air Command
SACEUR:	Supreme Allied Commander Europe
SCOR:	Security Council, Official Records
Sec:	Section
Sess.:	Session
SIPRI:	Stockholm International Peace Research Institute
SLBM:	Submarine- or sea-launched ballistic missile
SR.:	Summary record ³
SSR:	Soviet Socialist Republic
Suppl.:	Supplement
SWU:	Separative work unit
U—:	Uranium
UAR:	United Arab Republic
UF ₆ :	Uranium hexafluoride
UK:	United Kingdom
UN:	United Nations
UNDP:	United Nations Development Programme
UNESCO:	United Nations Educational, Scientific and Cultural Organisation
UNGA:	United Nations General Assembly.
UNIDO:	United Nations Industrial Development Organisation
UNITAR:	United Nations Institute for Training and Research
UNSCEAR:	UN Scientific Committee on the Effects of Atomic Radiation
UNTS:	United Nations Treaty Series
U ₃ O ₈ :	Uranium oxide
US:	United States
USSR:	Union of Soviet Socialist Republics.

WEU: Western European Union.
WHO: World Health Organisation.

It is imperative, as an integral part of the effort to halt and reverse the arms race, to prevent the proliferation of nuclear weapons. The goal of nuclear non-proliferation is on the one hand to prevent the emergence of any additional nuclear-weapon States besides the existing five nuclear-weapon States, and on the other progressively to reduce and eventually eliminate nuclear weapons altogether.

"Final Document of the Tenth Special Session of the UN General Assembly, devoted to disarmament, 30 June 1978"

PREFACE

Ever since the dropping of atomic bombs on Hiroshima and Nagasaki, the world has not ceased to fear these lethal weapons of mass destruction. Efforts to limit the spread of these weapons have not stopped ever since the "Baruch Plan" was presented by the United States to the United Nations in 1946. The "Plan" proposed the creation of an international Atomic Development Authority entrusted with all phases of the development and use of atomic energy, including managerial control or ownership of all atomic energy activities potentially dangerous to world security; power to control, inspect and license all other atomic activities; and the duty of fostering the beneficial use of atomic energy.

The failure of the "Baruch Plan" led to further efforts which culminated in the adoption by the United Nations General Assembly in 1961 of the so-called "Irish Resolution." This resolution is the starting point of the present study, since it contains the guiding concept of non-proliferation which has been embodied in the Treaty on the Non-Proliferation of Nuclear Weapons (NPT).

The "Irish Resolution" was followed four years later by the UN General Assembly resolution 2028 (XX) which contained the five principles on the basis of which the NPT was to be negotiated.

The two resolutions dominated the negotiations of the NPT until the Treaty itself was finally drafted and opened for signature on 1 July 1968. Part I of this study contains three introductory chapters dealing with both resolutions and the course of the NPT negotiations.

The purpose of this study is not only to analyse the NPT itself but also to assess the steps taken towards its implementation. The study covers the period between 1959, when the UN General Assembly adopted the first version of the "Irish Resolution", and the end of 1979, when the preparatory work for the Second NPT Review Conference was about to enter its last phase.

This study was originally completed at the end of 1974 as a dissertation submitted for the degree of *docteur ès sciences politiques* at the Graduate Institute of Higher International Studies, University of Geneva, Switzerland. It has, hence, been revised so as to include the many relevant developments that have, since 1974, taken place in the ever rapidly evolving field of nuclear energy harnessed for peace or for war.

The most relevant significant events since 1974 are: the convening in 1975 of the First NPT Review Conference; the 1976 Treaty on Underground Nuclear Explosions for Peaceful Purposes (PNRs) concluded between the United States and the Soviet Union; the 1977 Organizing Conference of the International Nuclear Fuel Cycle Evaluation; the US Nuclear Non-Proliferation Act of 1978; the Tenth Special Session of the UN General Assembly in 1978 devoted to disarmament; and the 1979 SALT II Agreement.

Several organizations have also been since 1974 heavily involved in the implementation of the NPT; foremost among them is the International Atomic Energy Agency (IAEA) in Vienna, which has been very active in the field of peaceful uses of nuclear energy, including peaceful nuclear explosions and the application of international safeguards. The Conference of the Committee on Disarmament (CCD) and its successor since 1979, the Committee on Disarmament (CD), have attached particular attention to the arms control and disarmament aspects of the NPT and the implementation of its provisions in this respect. On a regional level, the Agency for the Prohibition of Nuclear Weapons in Latin America (OPANAL) has also been involved in the implementation of the provisions of the 1967 Treaty for the Prohibition of Nuclear Weapons in Latin America, the so-called Treaty of Tlatelolco.

Ever since the Indian explosion of a "peaceful" nuclear device on 18 May 1974, the accelerated nuclear activities of a number of potential nuclear-weapon Powers or the so-called Threshold countries have continued to be a source of great concern for all those devoted to the cause of nuclear non-proliferation.

The basic method followed in this study is that of analysing the provisions of the NPT and their implementation on the basis of the five principles of General Assembly resolution 2028 (XX).

On the basis of the first principle of resolution 2028 (XX), principle (*a*), prescribing that the Treaty should be void of any loop-holes which might permit nuclear or non-nuclear Powers to proliferate, directly or indirectly, nuclear weapons in any form, an analysis is undertaken in Part II of this study of Articles I and II of the NPT. The two articles contain the basic obligations of the Parties to the Treaty imposing certain restrictions on the transfer and acquisition of nuclear weapons. Since plans for nuclear sharing within NATO, and more particularly the multilateral nuclear force (MLF), were at the origin of principle (*a*) as well as the formulation of Articles I and II, the first chapter of Part II is devoted to the study of this issue. This would permit a clearer understanding of Articles I and II, which are treated in the following chapter.

Under Part III, three aspects of the NPT are analysed on the basis of principle (*b*), which states that the Treaty should embody an acceptable balance of mutual responsibilities and obligations of the nuclear and non-nuclear Powers. The three aspects are: the peaceful uses of nuclear energy (Article IV), peaceful nuclear explosions (Article V) and nuclear security guarantees. The latter was dealt with outside the framework of the NPT but in close conjunction with it in resolution 255 of 19 June 1968 of the Security Council of the United Nations.

In Part IV, Article VI of the NPT is analysed on the basis of principle (*e*), which provides that the Treaty should be a step towards the achievement of General and Complete disarmament and more particularly nuclear disarmament. In this context, prospects and achievements in the field of arms control and disarmament, including SALT I and II Agreements, are treated.

Part V examines Article III of the NPT relating to the application of international safeguards as well as Articles VIII, IX and X relating to the adherence to the NPT and its provisions on duration, amendments, review and withdrawal. This examination is to ascertain whether principle (d) requiring workable provisions to ensure the effectiveness of the Treaty has been sufficiently observed. This part of the study dwells extensively on the role of the IAEA in the application of safeguards on the Parties to the NPT and on the question of universality of adherence to the Treaty including the study of the position of a number of reticent threshold States. The fact that the Treaty, as provided for in Article X, has an initial duration of twenty-five years which may even be extended indefinitely at the end of this period, gives this study an added significance.

Lastly, Part VI deals with Article VII of the NPT on the basis of principle (e) recognizing the right of any group of States to conclude regional treaties in order to ensure the total absence of nuclear weapons in their territories. This part concentrates on the Treaty of Tlatelolco as an example to be followed in the establishment of future nuclear-weapon-free zones. In this regard, a second section of Part VI is devoted to the "Comprehensive Study of the Question of Nuclear-Weapon-Free Zones in All Its Aspects" prepared by a group of governmental experts in 1975, which stands as a useful guide to all those interested in establishing nuclear-weapon-free zones of their own.

In the conclusions, an overview of the application of the five principles of General Assembly resolution 2028 (XX) to all the provisions of the NPT is undertaken. In anticipation of the 1980 NPT Review Conference, an overall assessment of the 1975 NPT Review Conference and its follow up is also made. Finally, some general considerations are emphasized for future action if the NPT is to survive as a viable and effective arms control measure.

In dealing with the issue of nuclear non-proliferation in all its varied and complex aspects, it is hoped that this study will be of interest to all those devoted to the halting of the spread of nuclear weapons, vertically and horizontally, and to the reversal of the nuclear arms race, quantitatively and qualitatively. It is hoped that it would be of use to governments, international and regional organizations, educational institutions as well as to individual lawyers, political scientists and historians. It is equally hoped that the global and comprehensive nature of this study will complement earlier works which have dwelled on the issue of nuclear non-proliferation from one angle or another.

In preparation of this study I had the special benefit of being a member of the Egyptian delegation to the Conference of the Eighteen-Nation Committee on Disarmament (ENDC) in Geneva during the crucial period of negotiating the NPT in 1965-1968 and later as a participant in the 1975 NPT Review Conference. However, so much has been contributed by so many people that the attempt to mention them all by name would extend this preface to undue length.

Special thanks must first be offered to the Graduate Institute of Higher International Studies in Geneva; without its generosity this study would have never been possible. I wish in particular to express my deep appreciation and gratitude to Professor Urs Schwarz who had kindly directed the original study as a doctorate dissertation. Professor Schwarz's experience and interest in the subject of this study was of irreplaceable value. I am also much indebted to Professor Louis J. Halle whose seminar on strategic studies at the Graduate Institute was partially responsible for the interest I have gained in the problem of the proliferation of nuclear weapons. Among the professors of the Graduate Institute, I wish to pay special tribute to my good friend Professor Georges Abi-Saab to whom I am indebted in many respects, especially his advice on some of the legal aspects of this study.

I also wish to thank a number of institutions without whom I would not have been able to gather all the data included in this study, more particularly the UN Library in Geneva and its most devoted personnel, the International Institute for Strategic Studies (IISS) in London and the IAEA in Vienna. With regard to the latter I wish to thank my colleagues at the Egyptian Embassy in Vienna who made the contacts with the Agency possible and fruitful.

I also wish to take this opportunity to express my gratitude to Ambassador Hussein Khallaf and Ambassador Ashraf Ghorbal of Egypt who have encouraged me and allowed me the necessary time to complete this study in its original form in Geneva and in its revised and expanded form in Washington, D.C.

I cannot omit to mention Mrs. Frances Morris, to whom has fallen the ungrateful but indispensable task of typing and retyping the manuscript as it stands in its present shape.

In conclusion, I must emphasize that opinions expressed in this study are entirely my own, and do not necessarily represent the views of my Government on the issues treated therein.

McLean, Va., January 1980

Mohamed I. Shaker

PART I

DRAFTING THE TREATY : THE FOUNDATION AND COURSE OF NEGOTIATIONS

CHAPTER 1

The Formulation of a Guiding Concept :

The Irish Resolution

It was in response to Irish endeavours in the United Nations in the years 1958-1961 that a concept of non-proliferation of nuclear weapons was laid down in a United Nations General Assembly resolution. This concept served as a guide to successive steps within and outside the United Nations with the intention of arresting the proliferation of nuclear weapons. It is through the study of that earlier phase of non-proliferation efforts that the limits of the concept as well as the problems raised during the process of its formulation, of which some are still reflected in the Treaty on the Non-Proliferation of Nuclear Weapons, can be better understood.

Before embarking on this study, it appears to us that no special reasons pertaining particularly to Ireland had motivated this country's efforts in that earlier phase. The high ideals of the Minister for External Affairs of Ireland, Mr. Frank Aiken, as can be deduced from his statements and writings, were apparently the catalyzers for his country's stand. Moreover, Ireland's stand on non-proliferation is no exception to the increasing role played by other small countries members of the United Nations in the peaceful resolution of many problems pertaining to world peace and security and, more particularly, in the field of disarmament and arms control.

The Irish Proposals of 1958

The initial steps that were taken by the Irish delegation in the thirteenth session of the UN General Assembly had two

objectives. The first step, in the form of a draft resolution, sought to "establish an ad hoc committee to study the dangers inherent in the further dissemination of nuclear weapons and recommend to the General Assembly at its fourteenth session appropriate measures for averting these dangers". The second preambular paragraph of the draft resolution, which revealed the Irish thinking on the problem, recognized that "the danger now exists that an increase in the number of States possessing nuclear weapons may occur, aggravating international tension and the difficulty of maintaining world peace, and thus rendering more difficult the attainment of general disarmament agreement..."¹

The second step, a set of proposed additions in the form of amendments to a seventeen-Power draft resolution on the suspension of nuclear weapons tests,² urged the parties involved in the negotiations on the suspension of tests, that they "shall not supply other States with nuclear weapons while these negotiations are taking place and during the period of any suspension of tests that may result therefrom", and also conversely called upon "all States which are not now producing nuclear weapons to refrain from undertaking their manufacture" during the same period.³

1 GAOR, 13th Sess., Anns., a.i. 64, 70 and 72, Doc. A/C.1/L.206, 17 Oct. 1958.

2 Ibid., Doc. A/C.1/L.205, 10 Oct. 1958.

3 Ibid., Doc. A/3974 and Add. 1 and 2, 3 and 4 Nov. 1958, para. 22. Those formal steps were less ambitious than those advocated by the Chairman of the Irish delegation in his speech before the General Assembly under the general debate item. He had proposed that the nuclear Powers should undertake not to supply nuclear weapons to any other country, and that the Assembly should then adopt a resolution calling on all other States to refrain from manufacturing or acquiring such weapons. The resolution could be followed by a convention in which those States would bind themselves not merely to renounce nuclear weapons, but to accept United Nations supervision of their nuclear development for peaceful purposes. See Ibid., 751st plen. mtg, 19 Sept. 1958, paras. 82-84.

In explaining his proposals to the First Committee of the General Assembly, the Minister for External Affairs of Ireland dwelt on the danger of the proliferation of nuclear weapons, the urgency of checking the problem and the essence of obligations introduced in the proposed amendments.

The danger was conceived by Mr. Aiken as increasing not only in proportion to the number of States possessing nuclear weapons but in geometric progression. While nuclear weapons were in the hands of a few highly developed States which had much to lose and little to gain by a nuclear war, and therefore felt a sense of deep responsibility regarding their use, the smaller States would have much less to lose and a temptation to exploit the enormous temporary advantage deriving from the possession of these weapons. Also by falling into the hands of revolutionary groups and organizations - and as history has shown, local wars and revolutions almost always involved great-Power rivalry - the use of nuclear weapons by a small State or a revolutionary group could easily set off a world-wide nuclear war.⁴

For Mr. Aiken, there were two imperative reasons why the proliferation of nuclear weapons should be checked as soon as possible. "The first was the slowness with which negotiations towards general disarmament were proceeding. The second was that failure to halt the spread of nuclear weapons during the long period of negotiations on general disarmament was likely to make those negotiations abortive."⁵

4 Ibid., 1st Cttee, 953rd mtg, 17 Oct. 1968, para. 5.

5 Ibid., 970th mtg, 31 Oct. 1958, para. 49. The reasons given by Mr. Aiken reflected a widespread view that so long as general disarmament negotiations were lengthy and complicated, certain identified problems amenable to solution should be attacked separately. For example, nuclear testing had already gained prominent attention. Measures aimed at such problems were later called "collateral measures".

As to the essence of the obligations in the proposed amendments to the seventeen-Power draft resolution, Mr. Aiken explained that :

"It was essential that the 'nuclear Powers' should undertake not to transfer nuclear weapons to other States, if manufacture of those weapons by the 'non-nuclear Powers' was to be avoided. Indeed, until the 'nuclear Powers' formally undertook to refrain from doing so, the 'non-nuclear Powers' might fear a possible transfer to an enemy or rival, and strive to offset that risk by trying to manufacture their own nuclear weapons..."⁶

In submitting his proposals to the First Committee of the General Assembly, Mr. Aiken had anticipated some of the arguments that were later invoked against the suggested amendments to the seventeen-Power draft resolution. They were :⁷

First : The establishment of "have" and "have not" States with respect to nuclear weapons would infringe the principle of the sovereign equality of States and reduce the prestige of the "have not" States. There is no better illustration of this argument than the position of France which was still in 1958 a non-nuclear-weapon State. Mr. Jules Moch, the French representative, stated that :

"France would not accept being excluded from the number of 'nuclear Powers' so long as other Powers continued to increase their stockpiles of nuclear weapons and consequently, the risks of war."⁸

The argument was also advanced by States not striving for a nuclear armament of their own, such as Argentina whose

6 Ibid., para. 52.

7 Ibid., 953rd mtg, 17 Oct. 1958, paras. 5-9.

8 Ibid., 964th mtg, 27 Oct. 1958, para. 17. France exploded its first atomic device on 13 Feb. 1960 in the Sahara testing-grounds near the Reggane oasis about 700 miles south-west of Algiers. See Keesing's Contemporary Archives, Vol. XII, 1959-1960, pp. 17279-17280A.

representative stated that the adoption of the amendments "would mean giving legal sanction to the unequal situation resulting from the fact that only a few Powers possessed nuclear weapons. The effect would be to create a gulf between the small Powers and the great Powers."⁹

Second : By limiting freedom of action in the disposal of nuclear weapons, the effectiveness of various systems of defensive alliances would be impaired. The Canadian representative while agreeing that the indiscriminate transfer of nuclear weapons to nations that did not possess them should be discouraged, was of the view that the transfer "should not be prohibited completely until appropriate disarmament measures had been agreed upon."¹⁰

Third : Since the presence of nuclear weapons was virtually impossible to detect, it would be impossible to control compliance with the requirement that States possessing such weapons should not hand them over to the States which did not yet possess them. Ambassador Cabot Lodge, the United States representative, was categorical on this point. He said that "the United States could not accept an obligation the observance of which could not be verified."¹¹

Mr. Aiken, who tried to answer in advance the arguments he himself anticipated and which were later raised by other participants in the First Committee discussions, wrote an article three years later in which he developed his ideas more clearly¹². They can be summarised as follows :

9 GAOR, 13th Sess., 1st Cttee, 957th mtg, 21 Oct. 1958, para. 27.

10 Ibid., 954 mtg, 20 Oct. 1958, para. 23.

11 Ibid., 969th mtg, 31 Oct. 1958, para. 21.

12 Frank Aiken, "Can We Limit the Nuclear Club ?", Bulletin of the Atomic Scientists, Vol. XVII, No. 7, Sept. 1961, pp. 263-266.

On the question of establishing two categories of States, it was pointed out that any State which voluntarily forewent its right to the destructive power of nuclear weapons in order to get others to do likewise was likely to serve its own vital interests better than by increasing the danger of the destruction of civilization.

On the question of defensive alliances, keeping nuclear weapons on the territory of the allies of nuclear States under the latter's control, though regrettable, was regarded as necessary in an atmosphere of distrust. The proposals were considered moderate and having a strictly limited objective, namely the prevention of nuclear anarchy while steps were being taken to achieve permanent peace.

On the question of the clandestine transfer of nuclear weapons by a nuclear Power to its allies, the answer was that it was hardly likely that a nation which had thereby increased its own military strength and standing among other nations would choose to reduce its influence over them by sharing its nuclear weapons, even with one of its allies. If a country saw temporary advantage in breaking the agreement, it would run the risk of being pilloried as a violator of a pledge to the United Nations. In Mr. Aiken's view it would be foolish to become so preoccupied with the question of physical control measures that sight was lost of the fact that the keeping of a given agreement might be so clearly in the interests of all nations that fully effective physical control measures might not be necessary.

These three questions which were raised at an early stage of the non-proliferation efforts were to become serious problems to reckon with during the later stages of the NPT negotiations.

In an effort to secure the widest possible agreement, the Irish representative had considered it wise to separate the question of the restriction of dissemination of nuclear weapons from that of the discontinuance of tests. And since it

was clear that no substantive resolution on disarmament could be adopted, he withdrew his amendments.¹³

As to the draft resolution submitted by the Irish delegation to establish an ad hoc committee, the trend was in favour of existing bodies dealing with disarmament problems instead of establishing a new committee to study the problem of the proliferation of nuclear weapons. The United States, among other delegations, did not support the idea of a new committee "because such a committee would in effect be a committee to examine the whole disarmament question thus duplicating the work of the Disarmament Commission".¹⁴ The Disarmament Commission was about to be enlarged at the same session of the Assembly to include all members of the United Nations and this further explains the reluctance towards establishing a new committee.¹⁵

The Irish delegation had asked, however, for a separate roll-call vote on the second preambular paragraph of its draft resolution (already quoted above). The paragraph was approved by 37 votes in favour (including the USSR and the Eastern European States), none against and 44 abstentions (including the United States and other NATO members).¹⁶ The Irish representative was gratified to note that no delegation had voted against that paragraph. Nevertheless, he did not wish to recommend any particular method for the study of the problem and he therefore withdrew the draft resolution, hoping that the Disarmament Commission would give the matter priority.¹⁷ Mr. Jules Moch, the then French representative in the

13 GAOR, 13th Sess., 1st Cttee, 969th mtg., 31 Oct. 1958, para. 38.

14 Ibid., para. 22.

15 GA Res. 1252 D(XIII), 4 Nov. 1958. Ibid., Anns., a.i.64, 70 and 72, pp. 28-29.

16 Ibid., 1st Cttee, 970th mtg, 31 Oct. 1958, para. 87.

17 Ibid., para. 88.

First Committee said, in a book he published much later, that the Irish draft resolution of 1958 might have been quickly withdrawn upon the insistence of one of the States on the verge of becoming a nuclear Power, thus leaving the impression that it was upon France's insistence that the draft was withdrawn.¹⁸

At any rate, in withdrawing its amendments and draft resolution, the Irish delegation must have felt that the atmosphere was not yet ripe to discuss and study a problem of great complexity brought before the United Nations for the first time as a side-issue to the discussion of general disarmament and a test ban. However, the tactic resorted to by the Irish delegation in requesting a separate vote on the second preambular paragraph of the draft resolution was obviously intended to put on record the recognition by member nations of an existing danger necessitating an urgent solution.

Before turning to the subsequent phases of Irish endeavours, an explanation ought to be given, at that early stage of non-proliferation efforts, of the attitudes of the Soviet Union and the United States, the two countries which later played central roles in the formulation of a basic treaty text which they co-sponsored.

The Soviet delegation, though voting in favour of the second preambular paragraph of the Irish draft resolution, did not comment at all on any of the proposals.¹⁹ It is to be noted that at that time the Soviets had not taken any firm

18 Jules Moch, Destin de la paix (Paris : Mercure de France, 1969), pp. 143-144.

19 All Eastern European delegations had the same attitude with the exception of the Albanian delegation which was of the view that the amendments proposed by Ireland in no way changed the substance of the seventeen-Power draft resolution on nuclear testing considered to be unacceptable to it. See GAOR, 13th Sess., 1st Cttee, 954th mtg, 20 Oct. 1958, para. 10.

declaratory position against proliferation.²⁰ As early as 1952, however, and especially from 1958, the Soviets began to show a decided interest in the establishment of various atom-free zones. They also pushed strenuously for a nuclear test ban. But the dominant feature of that period was a growing ambivalence on the part of the Soviet Union towards the whole question of proliferation coupled with a tendency to conceptualize the question of proliferation primarily in terms of the Sino-Soviet relationship. The USSR had signed an agreement with the Chinese on 15 October 1957 concerning the transfer of nuclear technology and sample materials from the Soviet Union to China, which was unilaterally abrogated by the Soviet Union on 20 June 1959.²¹ It was abrogated in the aftermath of the Taiwan Straits crisis, when The People's Republic of China attempted to wrest the offshore island of Quemoy from Taiwan in the summer of 1958. The Soviets, alerted by the enormous explosiveness of the situation, were awakened to the ominous prospect that in some future crisis, in which China possessed its own atomic bombs, Moscow might be dragged into a catalytic nuclear confrontation with the United States because of some irresponsibility on the part of its erstwhile ally. The

20 Oran R. Young, "The Soviet Stand on Proliferation of Nuclear Weapons", Foreign Affairs Reports, Vol. XV, No. 7, July 1966, p. 84. An analytic study of the Soviet public statements on non-proliferation from November 1966 to October 1968, a period marked by intense negotiations on a non-proliferation treaty, reached the conclusion that even until April 1968 only slightly more than one per cent of Soviet statements gave expression to the anti-proliferation argument, i.e., proliferation confronts the world with the prospect of uncontrollable nuclear conflict and, for that reason, must be regarded as a capital threat. See Gerhard Wettig, "Soviet Policy on the Non-proliferation of Nuclear Weapons, 1966-1968", Orbis, Vol. XII, No. 4, Winter 1969, p. 1060.

21 O. Young, loc.cit., pp. 83-84. On the importance of Soviet aid to China resulting in the October 1964 detonation of a Chinese nuclear device, see Morton Halperin, China and the Bomb (London : Pall Mall Press, 1965), pp. 78-82.

experience of the crisis marked a significant watershed not only in the erosion of the Sino-Soviet relationship but also in the evolution of Moscow's opposition to nuclear proliferation.²²

As for the United States, as well as for other NATO members, the displeasure caused by the Irish proposals needs to be explained beyond their declaratory positions in the United Nations. The successful launching by the USSR of the 'Sputnik' on 4 October 1957, and the subsequent emplacement of Soviet missiles aimed at Europe, had shaken the confidence of both the United States and Western Europe in the effectiveness of the American deterrent system. As a result, the United States decided to deploy nuclear delivery systems including intermediate range ballistic missiles (IRBM), Thors and Jupiters, in Europe, and entered into a series of bilateral nuclear stockpile arrangements with over half of its NATO allies. Basically, these arrangements provided the authority for the release of American nuclear weapons stored in Europe to the appropriate NATO commanders in the event of hostilities. Therefore, a non-proliferation resolution in 1958 would have been a psychological barrier to the type of nuclear arrangements the United States was negotiating. The United States was putting flexibility in the use of nuclear weapons above the international efforts to erect barriers against the acquisition of nuclear weapons.²³

The Irish Resolution of 1959

In 1959, upon Ireland's request the question of the "prevention of the wider dissemination of nuclear weapons" was

22 Benjamin S. Lambeth, "Nuclear Proliferation and Soviet Arms Control Policy", Orbis, Vol. XIV, No. 2, Summer 1970, pp. 300 and 309-311. For a brief account of the Quemoy crisis, see Urs Schwarz, Confrontation and Intervention in the Modern World (Dobbs Ferry, New York : Oceana Publications, 1970), pp. 70-71.

23 William B. Bader, The United States and the Spread of Nuclear Weapons (New York : Pegasus, 1968), pp. 38-40.

included as a separate item in the agenda of the fourteenth session of the General Assembly.²⁴

As a Ten-Nation Disarmament Committee was "set up in 1959 by an agreement reached among the governments of France, the USSR, the United Kingdom and the United States to consider disarmament matters,"²⁵ the Irish delegation submitted to the First Committee of the General Assembly a draft resolution suggesting that the Ten-Nation Committee should, in the course of its deliberations on disarmament, consider appropriate means whereby the danger of an increase in the number of States possessing nuclear weapons might be averted "including the feasibility of an international agreement, subject to inspection and control, whereby the Powers producing nuclear weapons would refrain from handing over the control on such weapons to any nation not possessing them and whereby the Powers not possessing such weapons would refrain from manufacturing them".²⁶ (Emphasis added.)

The draft resolution of 1959, which incorporated the adopted second preambular paragraph of the withdrawn Irish draft resolution of 1958 as a first preambular paragraph, went further than the previous Irish proposals in suggesting and singling out an international agreement as one means to check the proliferation problem. Another important development

24 GAOR, 14th Sess., Anns., a.i. 67, Docs. A/4125, 18 June 1959 and A/4286, 18 Nov. 1959.

25 DCOR, Suppl. for Jan. to Dec. 1959, Doc. DC/144, 8 Sept. 1959, Anns., para. 1. The participants in the "Committee" in addition to the four Powers were Bulgaria, Canada, Czechoslovakia, Italy, Poland and Romania. It should be noted that the enlarged Disarmament Commission had only met once in 1959 and had dealt solely with a resolution welcoming the setting up of the Ten-Nation Committee. Ibid., Doc. DC/146, 11 Sept. 1959.

26 GAOR, 14th Sess., Anns., a.i. 67, Doc. A/4286, 18 Nov. 1959, para. 5.

was the introduction of the term "control" as opposed to the terms "supply" and "possession" in the 1958 proposals.²⁷

The discussion of the Irish item before the First Committee was very brief. The attention was focused rather on "general and complete disarmament" (GCD), an item which was included for the first time in the agenda of the fourteenth session of the General Assembly at the request of the Soviet Union,²⁸ on whose behalf Premier Khrushchev, addressing the Assembly on 18 September 1959, proposed a new disarmament programme.²⁹

The Irish draft was welcomed by most delegations participating in the debate. It was supported especially because of its procedural character, as it did not propose specific solutions and in no way committed the General Assembly.³⁰ Thus the approach to the problem of the proliferation of nuclear weapons was still cautious and in the sphere of exploring ways and means of checking it.

The United States, which was displeased with the 1958 Irish proposals, supported the 1959 draft resolution. By that time certain developments had moved the United States in the direction of an active non-proliferation policy. The White House realized that Congress would not consent to a major extension of nuclear-weapon cooperation to any country but Great

27 The Irish representative in submitting the draft resolution did not define what exactly was meant by the term "control". See note 34 below.

28 GAOR, 14th Sess., Anns., a.i. 70, Docs. A/4218 and A/4219, 19 Sept. 1959.

29 Ibid., 799th plen. mtg, 18 Sept. 1959, paras. 2-106.

30 For example, see Ibid., 1st Cttee, 1054th mtg, 13 Nov. 1959, para. 17 (Netherlands) and para. 18 (Ceylon); 1055th mtg, 16 Nov. 1959, para. 17 (Greece), and para. 27 (Uruguay); and 1056th mtg, 16 Nov. 1959, para. 18 (UAR).

Britain.³¹ (Subsequently France made it clear that despite this rebuff it was going to defy Washington and build a national atomic force.³²) The United States was also beginning to suspect that it had overreacted to 'Sputnik' and that it was capable of handling the Soviet missiles without the aid of allies. It also came to the conclusion that its 'atoms for peace' approach to halting the spread of nuclear weapons was not only ineffective but was actually helping countries to develop at least a threshold nuclear capability.³³

Moreover, it was argued that whatever the origins of the idea of "control", the language of the 1959 draft resolution was tailored to the developing American position on the proliferation question, i.e., willingness to pledge adherence to any doctrine creating barriers to any additional independent nuclear forces but maintaining the right to provide information, weapons and technology to any established nuclear force

31 The Atomic Energy Act of 1954 as amended in 1958 authorized the transfer to allies of the non-nuclear parts of atomic weapons, fissionable nuclear materials suitable for the development of, or use in, nuclear weapons, and sensitive information concerning nuclear weapons and nuclear equipment such as military reactors. The transfer was restricted to nations which had already made substantial progress in the development of atomic weapons. For the text of the 1958 Act amendment, see United States Statutes at Large, 85th Congress, 2nd Session, 1958, (Vol. 72, Part I, Public Laws and Reorganization Plan) (Washington, D.C. : US Government Printing Office, 1959), pp. 276-279. For the meaning of the term "substantial progress", see Bader, The United States and the Spread of Nuclear Weapons, pp. 30-33.

32 At the fourteenth session of the General Assembly, France maintained its previous position during the thirteenth session. The French delegate explained that his delegation would not vote for the Irish draft because the measures envisaged in it were not disarmament measures. GAOR, 14th Sess., 1st Cttee, 1056th mtg, 16 Nov. 1959, para. 23.

33 Bader, The United States and the Spread of Nuclear Weapons, p. 40. See also, for action-reaction to "Sputnik" and Soviet missiles, Chalmers M. Roberts, The Nuclear Years. The Arms Race and Arms Control, 1945-70 (New York : Praeger, 1970), pp. 42-43.

and to provide weapons and training to any non-nuclear Power as long as the United States maintained "control" of the firing system.³⁴

The Soviet Union did not support the Irish draft resolution because the draft did not prohibit States from having nuclear weapons outside their own territory, outlawing such weapons and destroying their stockpiles, or eliminating foreign bases. For the Soviet Union, those problems had to be resolved if the wider dissemination of nuclear weapons was to be prevented at all.³⁵ It is obvious that the Soviet Union was unhappy that nuclear weapons were being placed on European soil under United States control. Moreover, since the Soviet Union had, under its 1957 agreement with the People's Republic of China, helped to transfer nuclear technology by giving a significant nuclear weapons technical aid - an agreement abrogated in June 1959 - it was not unexpected to find the Soviet Union hesitant and embarrassed at the prospects of pushing a policy of non-proliferation too strongly. There were also strong indications that effective steps to prevent proliferation during this period would have resulted in an exacerbation of the Sino-Soviet rift with a disruptive effect on the cohesion of the communist camp.³⁶

34 Bader, The United States and the Spread of Nuclear Weapons, p. 41. The term "control" was later defined by the United States to mean "right or ability to fire nuclear weapons without the concurrent decision of an existing nuclear-weapon State". This definition was included in a set of amendments introduced by the United States on 21 March 1966 to its own first draft treaty presented on 17 August 1965. DCOR, Suppl. for Jan. to Dec. 1965, Doc. DC/227, Ann. 1, Sec. A(ENDC/152, 17 Aug. 1969) and Ibid., Suppl. for 1966, Doc. DC/228, Ann. 1, Sec. K(ENDC/152/Add.1, 21 Mar. 1966).

35 GAOR, 14th Sess., 1st Cttee, 1056th mtg, 16 Nov. 1959, para. 24. See also the positions of Czechoslovakia and Bulgaria at the same meeting.

36 O. Young, loc. cit., pp. 85-86.

The Irish draft was adopted by the First Committee on 16 November 1959,³⁷ and a few days later by the General Assembly on 20 November by 68 votes in favour, none against and 12 abstentions (including the USSR, Eastern European countries and France).³⁸

The importance of that first Irish resolution lies primarily in the recognition by the General Assembly, the plenary organ of the United Nations, of an existing danger in the proliferation of nuclear weapons. The danger was stated, in the first paragraph of the resolution, as tending to aggravate international tension, and rendering more difficult the maintenance of world peace and the attainment of an agreement on general disarmament. That concept of danger was maintained during different phases of NPT negotiations.

The Five-Power Resolution of 1960

The Conference of the Ten-Nation Committee, during the meetings it held from 15 March to 28 June 1960, did not consider the problem of the proliferation of nuclear weapons as had been suggested by the Irish resolution of 1959. The Conference's attention was mainly devoted to general and complete disarmament (GCD) until it came to an end on 28 June 1960 upon the withdrawal, the day before, of the Soviet Union and the other four Eastern European participants.³⁹ Consequently, upon

37 GAOR, 14th Sess., 1st Cttee, 1056th mtg, 16 Nov. 1959, para. 29.

38 GA Res. 1380 (XIV), 20 Nov. 1959. Ibid., Anns., a.i. 67, p. 3. For the detailed results of the voting, see Ibid., 841st plen. mtg, 20 Nov. 1959, para. 10.

39 For an account of the Conference, see Hugh Thomas, Death of a Conference : An Account of the Negotiations for General Disarmament (London : The United Nations Association of Great Britain and Northern Ireland, 1960). See also, Bernhard G. Bechhoefer, Postwar Negotiations for Arms Control (Washington, D.C. : The Brookings Institution, 1961), pp. 536-557. The withdrawal took place in the aftermath of the American U-2 photographic reconnaissance aircraft

Ireland's request, the question of "prevention of the wider dissemination of nuclear weapons" was included for a second time in the agenda of the General Assembly at its fifteenth session.⁴⁰

Ireland submitted a draft resolution to the First Committee which was subsequently co-sponsored by Japan, Ghana, Mexico and Morocco. By virtue of the five-Power draft resolution, the General Assembly would :

"(1) call upon all governments to make every effort to achieve permanent agreement on the prevention of the wider dissemination of nuclear weapons;

(2) call upon Powers producing such weapons, as a temporary and voluntary measure pending the negotiation of such a permanent agreement, to refrain from relinquishing control of such weapons to any nation not possessing them and from transmitting to it the information necessary for their manufacture; and

(3) call upon Powers not possessing such weapons, on a similar temporary and voluntary basis, to refrain from manufacturing these weapons and from otherwise attempting to acquire them."⁴¹ (Emphasis added.)

The 1960 Irish text went further than the Irish resolution of 1959 in several respects. First, a permanent agreement became a definite choice for the prevention of the proliferation of nuclear weapons. Second, the new text called upon the non-nuclear States to declare at once their intention neither to make nor to acquire such weapons. It also called upon the

incident over Sverdlovsk in the Soviet Union and the crisis atmosphere resulting from the abandonment of the summit meeting between the heads of Governments of France, the USSR, the United Kingdom and the United States, which was to be held in Paris on 16 May 1960.

40 GAOR, 15th Sess. Anns. (Vol. II), a.i. 67, 86, 69 and 73, Doc. A/4434, 15 Aug. 1960 and Doc. A/4680, 20 Dec. 1960, para. 2.

41 Ibid., Doc. A/4680, 20 Dec. 1960, para. 10.

non-nuclear States, as a temporary measure, to declare immediately their intention neither to make nor to acquire such weapons.⁴² Moreover, the text called upon the nuclear States, not only to refrain from relinquishing control of nuclear weapons but also to refrain from transmitting the information necessary for their manufacture. Lastly, the Powers not possessing nuclear weapons were not only called upon to refrain from manufacturing such weapons but also to refrain from making other attempts to acquire them. As a whole, for the first time, the new text dealt with the substance of the matter in contrast with the two previous Irish attempts which were of a rather dominant procedural character.

In explaining the new draft, Mr. Aiken clearly demonstrated its limits and shortcomings. He explained that :

"The draft resolution took account of the difficulties of the nuclear Powers - the fact that their defence now depended upon nuclear weapons, that there was no infallible method of inspection and control, and that a secretly retained stockpile of nuclear weapons would give an unscrupulous State the power to dominate the world. For that reason, the draft did not call for immediate surrender or destruction of nuclear weapons, and would not prohibit the nuclear Powers from retaining such weapons, pending future agreement, provided that they were kept in the possession and under the control of their own forces."⁴³

The item proposed by Ireland did not receive much attention in the phase of the general debate in the First Committee where all items on disarmament were discussed together and where the main attention was focused on GCD, already taken up by the abortive Conference of the Ten-Nation Committee on Disarmament. Special attention to the Irish item was

42 See the statement made by the Irish representative. GAOR, 15th Sess. (Part I), 1st Cttee, 1120th mtg, 1 Dec. 1960, para. 8.

43 Ibid., para. 10.

in the phase of consideration of the five-Power resolution and only among few members of the First Committee mainly representing Eastern European Countries and NATO.

The Soviet Union and other Eastern European countries were in favour of the draft resolution. One country, Bulgaria, while ready to vote for the Irish draft, noted that another draft resolution presented by Poland⁴⁴ had the advantage of explicitly calling upon States not possessing nuclear weapons to refrain from manufacturing them on their own or other territory.⁴⁵ The Bulgarian representative was worried about "the danger that nuclear weapons might be consigned to the militarist designs against neighbouring countries".⁴⁶ Another country, Poland, explained that its support for the Irish draft did not imply acceptance of the idea that the great Powers should possess nuclear weapons indefinitely.⁴⁷ The importance of the Bulgarian stand is that it was very indicative of a future persistent theme in Soviet and Eastern European statements opposing nuclear sharing arrangements within NATO. Generally speaking, the USSR, at that time, was apparently viewing the solution of the problem of the proliferation of nuclear weapons rather in the context of creating a favourable atmosphere

44 Ibid., Anns. (Vol. II), a.i. 67, 86, 69 and 73, Doc. A/C.1/L.252/ Rev. 1, 24 Oct. 1960. The draft was entitled "Establishment of Conditions Conducive to Reaching Agreement on General and Complete Disarmament". The draft was not put to the vote in the First Committee.

45 Ibid., 1st Cttee, 1120th mtg, 1 Dec. 1960, para. 4.

46 Ibid., para. 3. It is to be noted that in 1954, the Federal Republic of Germany undertook not to manufacture in its territory any atomic weapons as part of the arrangements for its accession to NATO. This undertaking is incorporated into the protocols modifying and extending the Brussels Treaty of 17 March 1948, which were signed in Paris on 23 October 1954. See UNTS, Vol. 211, pp. 364 and 368.

47 GAOR, 15th Sess. (Part I), 1st Cttee, 1135th mtg, 19 Dec. 1960, para. 38.

for the solution of the problem of general and complete disarmament.⁴⁸

The NATO countries were divided on the Irish draft. Those in favour of it were Canada, Denmark, Iceland and Norway. Among those not in favour of it were the Netherlands, Italy and the United States, the countries which expressed their views in the First Committee. The Netherlands doubted whether the Assembly would be acting wisely in expressing an opinion on the substance of the matter in the manner recommended in the draft resolution. It regretted that the idea of a study had been omitted from the draft resolution, while the object, namely, an international agreement, had been relegated to the second place, nuclear and non-nuclear Powers being requested to accept a unilateral moral obligation. It noted further that the draft did not propose any time-limit for the obligation and it did not offer sufficient assurances of substantial control.⁴⁹ The Italian representative equally expressed reservations on de facto moratoria unaccompanied by controls.⁵⁰

The United States objections to the Irish draft were, as stated in the First Committee, based on two arguments. One was that it called for unverified commitments of indefinite duration.⁵¹ The other was that :

"The nuclear Powers cannot expect other nations indefinitely to deny to themselves such weapons as

48 Ibid., 1119th mtg, 29 Nov. 1960, para. 38. See also Romania, 1120th mtg, 1 Dec. 1960, para. 22.

49 Ibid., para. 44.

50 Ibid., 1135th mtg, 19 Dec. 1960, para. 36. Italy, a few years later, on 14 September 1965, presented to the ENDC a "Draft of a Unilateral Non-acquisition Declaration", containing an undertaking to accept inspection. See, DCOR, Suppl. for Jan. to Dec. 1965, Doc. DC/227, Ann. 1, Sec. D (ENDC/157, 14 Sept. 1965).

51 US Department of State, Documents on Disarmament, 1960 (Pub. No. 7172, July 1961) (Washington, D.C. : US Government Printing Office, 1961), p. 372.

they may believe are required for their defence if they, the nuclear Powers, refuse to accept the responsibility of halting their own build-up of nuclear weapons and refuse to begin the process of their destruction. This is why we have for so long sought action in the nuclear field by the nuclear Powers. One of our concerns with the resolution therefore, is that it does not recognize the central responsibility of the nuclear Powers."⁵²

An interesting point here is that the argument was also made in similar terms during the same session of the Assembly by India but which voted for the Irish text "because it was the least we could obtain".⁵³ The Indian representative explained that their vote on this "should not in any way be interpreted to mean that the Government of India has changed its position with regard to the total abandonment of nuclear weapons."⁵⁴ A more interesting point is that the argument which was later resorted to by India and many other countries in the different phases of the NPT negotiations was abandoned by the United States itself, which was pushing for an NPT free of any obligation on the part of the nuclear-weapon States to halt their own build-up of nuclear weapons and their means of delivery.

It seems, however, that United States' objections to the Irish text in 1960 stemmed from the well-established opposition of the Eisenhower Administration to any restrictions on the transfer of American nuclear technology to allies.⁵⁵ The Irish resolution supported by the United States in 1959 drew a distinction between 'control' and 'possession'. But the 1960

52 Ibid.

53 GAOR, 15th Sess. (Part I), 960th plen. mtg, 20 Dec. 1960, para. 33.

54 Ibid., para. 35.

55 For an account of an explanation of United States' opposition to the Irish text of 1960, see Bader, The United States and the Spread of Nuclear Weapons, pp. 42-47, from which the following is partly drawn.

Irish text went beyond that distinction and called into question the concept of transfer of "information". In the fall of 1960, an important development was evolving in the field of the control and use of nuclear weapons within the Atlantic alliance. At the December 1960 NATO ministerial meeting, United States Secretary of State, Mr. Christian Herter, suggested the idea of a medium range ballistic missile (MRBM) multilateral force; a force which was envisaged as a means of satisfying European allies desirous of having a larger share in the nuclear defence of the alliance by providing a means by which they could at least 'own' but not 'control' nuclear weapons. An interesting point here is that on 19 December 1960, when the NATO communiqué including the suggestion of a MRBM multilateral force was released,⁵⁶ the voting was taking place on the Irish draft in the First Committee of the General Assembly. At that time too, the Kennedy Administration was about to take over in January 1961, and it seems that the departing administration was not willing to prejudice the future of any nuclear arrangement the United States might make with its NATO allies by subscribing to the Irish text. Moreover, according to one study, the opposition of the United States and other western Powers was determined by the French attitude,⁵⁷ France having detonated its first atomic device on 13 February 1960, the second on 1 April 1960, and was about to detonate the third one on 27 December 1960.⁵⁸

56 DOSE, Vol. XLIX, No. 1124, 9 Jan. 1961, pp. 39-40. For the suggested MRBM multilateral force, see para. 7 of the communiqué.

57 Harold Keran Jacobson and Eric Stein, Diplomats, Scientists and Politicians. The United States and the Nuclear Test Ban Negotiations (Ann Arbor : University of Michigan Press, 1966), p. 268.

58 Keesing's Contemporary Archives, Vol. XII, 1959-1960, pp. 17279-17280A and 17349A; and Vol. XIII, 1961-1962, p. 17844B.

The Irish draft was adopted in the First Committee on 19 December 1960,⁵⁹ and approved by the General Assembly on the following day by 68 votes in favour, none against and 26 abstentions (including the United States, France and other NATO countries).⁶⁰

The Irish Resolution, 1961

It was only on 4 December 1961 that the General Assembly, upon another Irish initiative,⁶¹ was able to adopt unanimously a resolution on the "prevention of wider dissemination of nuclear weapons",⁶² a resolution which has come to be widely known and referred to in disarmament and arms control negotiations' jargon as the "Irish Resolution". The Resolution :

"1. Calls upon all States, and in particular upon the States at present possessing nuclear weapons, to use their best endeavours to secure the conclusion of an international agreement containing provisions under which the nuclear States would undertake to refrain from relinquishing control of nuclear weapons and from transmitting the information necessary for their manufacture to States not possessing such weapons, and provisions under which States not possessing nuclear weapons would undertake not to manufacture or otherwise acquire control of such weapons;

2. Urges all States to co-operate to those ends."⁶³

The Irish resolution of 1961 is different from the previous one of 1960 in that it is categorical in calling only for an international agreement subject to inspection and control

59 GAOR, 15th Sess. (Part I), 1st Cttee, 1135th mtg, para. 23.

60 GA Res. 1576(XV), 20 Dec. 1960. Ibid., Anns. (Vol. II), a.i. 67, 86, 69 and 73, p. 27. For the detailed results of the voting, see Ibid., 960th plen. mtg, 20 Dec. 1960, para. 28.

61 GAOR, 16th Sess., Anns. (Vol. III), a.i. 81, Doc. A/4845, 16 Aug. 1961.

62 GA Res. 1665(XVI), 4 Dec. 1961. Ibid., p. 3.

63 Ibid.

without first seeking temporary and voluntary measures. Secondly, States possessing nuclear weapons were primarily held responsible to secure the conclusion of the international agreement.⁶⁴ Thirdly, States not possessing nuclear weapons were also called upon to undertake not to acquire control of nuclear weapons.⁶⁵

Since there was general support for the Irish text, the discussions in the First Committee were very brief. Some States, however, regretted that the text did not cover the contingency of a nuclear State delivering nuclear weapons to a non-nuclear State or training troupes belonging to the latter in the use of such weapons, while the former still retained control over them.⁶⁶ Fears were expressed by the two Eastern European countries participating in the discussions, Ukrainian SSR and Poland, that the plans to supply NATO forces with nuclear weapons might lead to the acquisition of those weapons by the Federal Republic of Germany, "a breeding place of militarism and revanchism",⁶⁷ and a country "committed to a policy

64 Mr. Aiken, in introducing the Irish text in the First Committee, suggested the setting up of a small committee of experts from the nuclear Powers to work out a draft agreement for submission to their own governments in the first instance. When the agreement had been signed by the nuclear Powers, it would be submitted to the UN for its approval and the accession of the non-nuclear Powers. Ibid., 1st Cttee, 1208th mtg, 30 Nov. 1961, para. 28.

65 The phrases "acquire control of" and "relinquishing control of" were put in the resolution so that the United States would be able to vote for it, thus allowing arrangements with allies for a certain sharing in the use of nuclear weapons. E.L.M. Burns, "Can the Spread of Nuclear Weapons be Stopped?", International Organization, Vol. XIX, No. 4, Autumn 1965, p. 858.

66 GAOR, 16th Sess., 1st Cttee, 1208th mtg, 30 Nov. 1961, para. 31 (Ukrainian SSR) and 1209th mtg, 30 Nov. 1961, para. 10 (India).

67 Ibid., 1208th mtg, 30 Nov. 1961 (Ukrainian SSR).

of annexing the German Democratic Republic and one-third of Polish territory".⁶⁸

The support brought to the Irish resolution in 1961 by both the United States and the Soviet Union was in line with the non-proliferation provisions included in the disarmament proposals put forward that year by each of them to the sixteenth session of the General Assembly.

The United States proposals entitled "Declaration on Disarmament : The United States Programme for General and Complete Disarmament in a Peaceful World"⁶⁹, dated 25 September 1961, included the following provision :

"States owning nuclear weapons shall not relinquish control of such weapons to any nation not owning them and shall not transmit to any such nation the information or material necessary for their manufacture. States not owning nuclear weapons shall not manufacture such weapons, attempt to obtain control of such weapons belonging to other States, or seek or receive information or materials necessary for their manufacture."⁷⁰

The Soviet Union proposals under the heading "Memorandum of the Government of the Union of Soviet Socialist Republics on Measures to Ease International Tension, Strengthen Confidence among States and Contribute to General and Complete Disarmament", dated 26 September 1961,⁷¹ included three paragraphs under the sub-heading "(m)asures to prevent the further spread of nuclear weapons". The first paragraph read as follows :

"The Soviet Government considers that there is at present a possibility of concluding an agreement by which the nuclear Powers would undertake not to

68 Ibid., 1209th mtg, 30 Nov. 1961 (Poland).

69 GAOR, 16th Sess., Anns. (Vol. I), a.i. 19, Doc. A/4891, 25 Sept. 1961.

70 Ibid., (Stage I, para. C, sub-para. (e)).

71 Ibid., Doc. A/4892, 27 Sept. 1961.

give nuclear weapons to other countries, and those States which do not possess nuclear weapons would undertake not to make them or obtain them from the nuclear Powers."⁷²

In supporting the Irish resolution of 1961, the Soviet Union was consistent with its position the previous year. However, it did not participate at all in the discussions on the non-proliferation item in the First Committee. The Soviet support for a non-proliferation policy was manifested in the above mentioned "Memorandum". But a very important development in the declared Soviet stand linked the danger of an increase in the number of Powers possessing nuclear weapons with Soviet preoccupation with the Federal Republic of Germany. The paragraph immediately following the first paragraph quoted above from the Soviet "Memorandum", included the following :

"It should be clearly realized what would be the result of placing atomic weapons at the disposal of the Federal Republic of Germany, where there are many people who cherish revanchist dreams and would stop at nothing to achieve their aggression ends."⁷³

This linkage was later accentuated, as this study will demonstrate, by the plans for nuclear sharing within NATO, i.e., the Multilateral Nuclear Force (MLF) and the Atlantic Nuclear Force (ANF).⁷⁴

The United States' favourable position in 1961, at variance with its position on the Irish resolution of 1960, can be explained by President Kennedy's new policy in the field of arms control and disarmament. He had long been interested in this field. He had come to office determined to do what he believed President Eisenhower had not done - press hard for

72 Ibid., para. 22.

73 Ibid., para. 23.

74 See Part II of this study.

meaningful agreements. An "Arms Control and Disarmament Agency" (ACDA) was established on 26 September 1961 upon President Kennedy's request, to deal with all arms control matters.⁷⁵ On the issue of nuclear proliferation, the Kennedy Administration policy was first to pacify non-nuclear allies, by giving them a greater voice in the management of the nuclear affairs of the alliance, by elaborating the idea of a multilateral nuclear force previously suggested by the outgoing Administration, and thirdly by perpetuating the established nuclear Powers' control of nuclear arms through a test ban and an active non-proliferation policy.⁷⁶

The Significance of the "Irish Resolution"

The "Irish Resolution" was the outcome of four sessions of the United Nations General Assembly. Neither the Disarmament Commission nor the Conference of the Ten-Nation Committee on Disarmament were able to discuss the problem of the proliferation of nuclear weapons. The discussions were on the whole very brief in a period of intensive debate on General disarmament and a test ban. The process was long but inevitable in an organ meeting once a year, and in an atmosphere of distrust and with complicated problems to resolve, especially in the context of alliance relationships.

The danger of the proliferation of nuclear weapons increasing in geometric progression, as seen by Ireland when it first brought the question before the United Nations, was never questioned during the four-year debate. There was a general tendency to accept a statistical danger in proliferation, i.e.,

75 Roberts, op.cit., pp. 52-54. For the "Arms Control and Disarmament Act" of 26 September 1961 establishing the "Agency", see US ACDA, Documents on Disarmament, 1961 (Pub. No. 5, Aug. 1962) (Washington, D.C. : US Government Printing Office, 1962), pp. 482-495.

76 Bader, The United States and the Spread of Nuclear Weapons, pp. 44-46.

the probability of nuclear war increasing as the number of nuclear Powers increases.⁷⁷ There was really no profound analysis of the danger. Reference was occasionally made to the danger of catalytic war or war by accident.⁷⁸ The danger of proliferation seemed to be accepted as such, without need for conceptualization, probably on the grounds of the great destructiveness and horrifying effects of a nuclear weapon's use in warfare.

The non-proliferation concept confronted, as it was evolving during the four years, many problems which were either resolved later on in the process of treaty-making or lingered on, after the NPT had entered into force, awaiting to be solved. All problems were mainly the result of the inescapable distinction between countries having nuclear weapons and countries not having such weapons.

The concept as sanctioned by the General Assembly in 1961 was twofold. First, the problem was to be dealt with by means of concluding an international agreement. This method of solution was accepted as such. As one writer explains, "(t)he impulse to discuss treaties stems, first of all, from the tendency of participants in the discussions unconsciously to call for discussion of the most traditional and formal methods of solution ..."⁷⁹ This is not to say that no other method was

77 On the statistical danger, see F.C. Iklé "Nth Countries and Disarmament", Bulletin of the Atomic Scientists, Vol. XVI, No. 10, Dec. 1960, p. 391.

78 For an extensive discussion of catalytic war, see Donald H. Kobe, "A Theory of Catalytic War", The Journal of Conflict Resolution, Vol. VI, No. 2, June 1962, pp. 125-142. See also, Henry Alfred Kissinger, The Necessity for Choice. Prospects of American Foreign Policy (New York : Harper, 1961), pp. 242-244.

79 Jeremy J. Stone, Strategic Persuasion. Arms Limitations through Dialogue (New York : Columbia University Press, 1967), pp. 85-86. Mr. Stone, though sceptical of formal agreements, concedes that a treaty to prevent the spread

conceived of at the time. Unilateral declarations were suggested by Ireland in 1960, as temporary measures. However it seems that criticism of the idea of unilateral declarations as well as the sudden resumption of nuclear testing by the USSR on 1 September 1961, after a three-year moratorium agreed to by the three nuclear-weapon States in 1958, had an effect in the discarding of this method of solution in 1961. On the other hand, a non-proliferation treaty was not considered as the sole measure to prevent the proliferation of nuclear weapons. A test-ban treaty was receiving high priority at the time of the adoption of the 1961 Irish resolution. Nuclear-free zones were also proposed and considered as effective non-proliferation measures. An international agreement as a general measure did not mean the neglect of other measures. On the contrary, these other measures, in conjunction with the international agreement, were given a part to play in erecting a non-proliferation regime.

Secondly, the international agreement was to be based on certain basic obligations on the part of both nuclear-weapon States and non-nuclear-weapon States. The former would undertake to refrain from relinquishing control of nuclear weapons and from transmitting the information necessary for their manufacture to the second group of states. The latter would undertake not to manufacture or otherwise acquire control of such weapons. We can distinguish here between three different situations :

of nuclear weapons has some real urgency. Another writer explains that "(o)ne manner in which any group deters action it considers 'anti-social' is to articulate its feeling in some form that is generally acknowledged as binding. This is part of the function of Law in a local community, and of treaty law in the legally more primitive international community." Michael E. Sherman, Nuclear Proliferation : The Treaty and After (Toronto : The Canadian Institute of International Affairs, 1968), p. 40, hereinafter cited as Nuclear Proliferation.

First, non-proliferation of nuclear weapons by barring independent national manufacture.⁸⁰ Only non-nuclear-weapon States would undertake not to manufacture nuclear weapons. Nuclear-weapon States would not be restricted quantitatively and qualitatively in continuing the manufacture of nuclear weapons. This unchecked activity can be defined as vertical proliferation. It should be noted, however, that the whole idea of the Irish resolution was based on the assumption that the nuclear-weapon-States themselves were going to disarm in the foreseeable future. Its support by the Assembly cannot therefore be interpreted as implying approval of the quantitative and qualitative arms race by the nuclear-weapon States.

Second, non-dissemination of nuclear weapons by both restricting the flow of information necessary for their manufacture and the transfer of control over the weapons. The nuclear-weapon States would refrain from transmitting the information, and the two categories of States would be bound by synallagmatic obligations as to control. The free transmission of information and transfer of control can be defined as horizontal proliferation. The nuclear-weapon States, however, would be free to transmit information and transfer the control to each other. Moreover, according to the letter of the resolution, non-nuclear-weapon States advanced in the field of nuclear research were not prohibited from transmitting information pertaining to the making of nuclear weapons to other non-nuclear-weapon States.

Third, dispersion of nuclear weapons beyond the territories of the manufacturing Power. This situation is allowed to continue as long as the weapons are under the control of the manufacturing country, as is still the case with the American nuclear weapons located in the Federal Republic of Germany.

⁸⁰ According to the dictionary of the "Encyclopaedia Britannica", to proliferate is "to produce, reproduce, or grow, especially with rapidity, as in tissue formation". Britannica World Language Dictionary (New York : Funk and Wagnalls, 1960).

With these three situations present, and for the sake of consistency, we opted for the use of one term in this study. Instead of the term "non-dissemination" used to denote the items proposed by Ireland as well as all Irish resolutions adopted by the Assembly, we opted for the use of the term "non-proliferation" for two obvious reasons. The first is that efforts to check the spread of nuclear weapons were mainly directed towards those countries capable of developing an independent nuclear-weapon capability without external help, if they took the political decision to do so.⁸¹ That, and not the dissemination of nuclear weapons by the nuclear-weapon States to the non-nuclear-weapon States was the main preoccupation. This is not to say that the danger of dissemination was underestimated or that no element of dissemination exists in developing independently a nuclear weapon capability. The second reason is that the term 'non-proliferation' was used in the following phases of the negotiations towards the formulation of a definite treaty text, which also uses that term.⁸²

Now that a concept had been formulated, the way would have seemed open for negotiating a treaty in which States possessing

81 According to a study published in 1960, it was found that several countries had the necessary knowledge, materials, and technicians to make nuclear weapons if they so wished. Potential nuclear Powers had been divided roughly into three groups with respect to nuclear capabilities. The first group comprises the highly industrialized countries, the second, the economically capable, technically fairly competent but perhaps somewhat more limited in scientific manpower, and the third group, the economically capable but more limited in industrial resources and scientific manpower. National Planning Association, The Nth Country Problem and Arms Control (Washington, D.C. : National Planning Association, Special Project Committee on Security Through Arms Control, Pamphlet No. 108, Jan. 1960).

82 It was only at the 19th Session of the General Assembly that an agenda item proposed by India was entitled non-proliferation of nuclear weapons. See GAOR, 19th Sess., Anns. (Vol. I), Ann. No. 2, Doc. A/5758, 10 Oct. 1964.

nuclear weapons were primarily held responsible, by the 1961 resolution, to lead the way towards securing its final conclusion. Meaningful negotiations were, however, delayed until draft treaty texts were presented and certain guiding principles were formulated upon which a treaty was to be negotiated.

CHAPTER 2

The Formulation of Guiding Principles :

GA Resolution 2028(XX)

In view of the unanimous approval of the "Irish Resolution" in 1961 and the importance given to non-proliferation in the United States and the USSR proposals on disarmament,¹ Ireland saw little need, during the 17th session of the General Assembly, for a further resolution on non-proliferation. The Irish representative had hoped, however, that without protracted negotiations, the nuclear Powers would agree at once amongst themselves not to give nuclear weapons or the knowledge of making them to countries which neither made nor possessed such weapons. Once such an agreement was arrived at by the nuclear Powers, it would be reciprocated by the agreement of the non-nuclear Powers and to accept international inspection of their territories as a guarantee of their good faith.² But though

1 By 1962, the USSR went further than its own proposals of 1961, referred to in Chapter 1, by submitting to the ENDC on 15 March 1962 a "(d)raft treaty on general and complete disarmament under strict international control", which provided, among the first-stage measures, an article on the "(p)revention of the further spread of nuclear weapons" (article 16). DCOR, Suppl. for Jan. 1961 to Dec. 1962, Doc. DC/203, Ann. 1, Sec. C(ENDC/2, 15 Mar. 1962). The United States too went further than its proposals of 1961, also referred to in the previous chapter, by submitting to the ENDC on 18 April 1962 an "(o)utline of basic provisions of a treaty on general and complete disarmament in a peaceful world", which provided also among the first stage measures a paragraph on "(n)on-transfer of nuclear weapons". *Ibid.*, Doc. DC/203, Ann. 1, Sec. F(ENDC/30, 18 Apr. 1962). Both proposals will be reverted to in Chapter 3 of this study.

2 UN Doc. A/C.I/PV.1267 (prov.), 6 Nov. 1962, pp. 57-62 in US ACDA, Documents on Disarmament, 1962 (Vol. II) (Pub. No. 19, Nov. 1963) (Washington, D.C. : US Government Printing Office, 1963), pp. 1205-1208.

considerable support was given to non-proliferation, no measures were specifically mentioned in any resolution adopted on disarmament at the 17th session.

At the 18th session of the General Assembly, an attempt in the First Committee to specify in a resolution on GCD "measures intended to prevent the proliferation of nuclear weapons" did not succeed. The sponsors of the draft of that resolution dropped any mention, in its revised form, of the specific measures which were previously enumerated, in its first form, as serving to reduce international tension, lessen the possibility of war and facilitate agreement on GCD. The omission was in response to objections raised by the Soviet Union that it was improper to specify measures proposed by certain countries while making no mention of those proposed by others.³

At the 19th session of the Assembly, an agenda item entitled "(n)on-proliferation of nuclear weapons" was proposed by India.⁴ But due to the special circumstances prevailing at that session caused by the conflict over payment of expenses incurred through the peace-keeping operations in the Middle-East and the Congo, and the threat of the application of article 19 of the UN Charter,⁵ the General Assembly was paralysed to the extent of not being able to draw up its own final agenda.⁶ It only adopted very few resolutions most of which were

3 GAOR, 18th Sess., Anns. (Vol. II), a.i. 26, pp. 5-7, Doc. A/5571/Add. I, 20 Nov. 1963, and Ibid., 1st Cttee, 1338th mtg, 15 Nov. 1963, para. 2.

4 Ibid., 19th Sess., Anns. (Vol. I), Ann. No. 2, Doc. A/5758, 10 Oct. 1964.

5 Article 19 stipulates that : "A member of the United Nations which is in arrears in the payment of its financial contributions to the Organization shall have no vote in the General Assembly if the amount of its arrears equals or exceeds the amount of the contributions due from it for the preceding two full years ..."

6 For the status of the agenda of the 19th session, see GAOR, 19th Sess., Anns. (Vol. I), Ann. No. 2, Doc. A/5884, 10 Feb. 1965, and Ibid., 1330th plen. mtg, 18 Feb. 1965, paras. 280-336.

necessary to secure the minimum requirements for the continuing machinery of the organization.⁷

It was only during the 20th session of the General Assembly in 1965 that a resolution on the non-proliferation of nuclear weapons was adopted for the first time since 1961. The resolution called for the negotiation of an international treaty to prevent the proliferation of nuclear weapons on the basis of the following five main principles :

(a) The treaty should be void of any loop-holes which might permit nuclear or non-nuclear Powers to proliferate, directly or indirectly, nuclear weapons in any form.

(b) The treaty should embody an acceptable balance of mutual responsibilities and obligations of the nuclear and non-nuclear Powers.

(c) The treaty should be a step towards the achievement of general and complete disarmament and, more particularly, nuclear disarmament.

(d) There should be acceptable and workable provisions to ensure the effectiveness of the treaty.

(e) Nothing in the treaty should adversely affect the right of any group of States to conclude regional treaties in order to ensure the⁸ total absence of nuclear weapons in their territories.

Before discussing each of the five principles and the immediate debates preceding their adoption by the Assembly, it should be pointed out that the principles were not simply the outcome of one session of the General Assembly. They had their roots in the Irish era of 1958-1961 and the four years that followed, especially in the ENDC and the Disarmament Commission debates.

In 1961, when the "Irish Resolution" was adopted, the General Assembly passed three resolutions on the "Question of Disarmament", two of which had dealt with three questions most

7 Ibid., Suppl. No.15 (A/5815).

8 GA Res. 2028(XX), 19 Nov. 1965. Ibid., 20th Sess., Anns. (Vol. III), a.i. 106, p. 5.

relevant to negotiating a non-proliferation treaty and consequently had a bearing on paving the way for the eventual formulation of the five principles.

First, upon a Swedish initiative,⁹ the United Nations Secretary-General was requested by the General Assembly to make an inquiry about the conditions under which countries not possessing nuclear weapons might be willing to enter into specific undertakings to refrain from manufacturing or otherwise acquiring such weapons and to refuse to receive, in the future, nuclear weapons in their territories on behalf of any other country.¹⁰

The results of the inquiry were included in a report submitted by the Secretary-General to the Disarmament Commission on 2 April 1962. The report was virtually a presentation of the text of replies received by the Secretary-General from sixty-two members of the United Nations.¹¹ It would be useful to present here a very brief summary which was later made of those replies by the UN Secretariat. The summary goes as follows :

9 Ibid., 16th Sess., Anns., a.i. 19, Doc. A/4980, 22 Nov. 1961, para. 5 and Doc. A/4980/Add. 1, 30 Nov. 1961, paras. 2-5.

10 GA Res. 1664(XVI), 4 Dec. 1961. Ibid., p. 31. The United States (as well as other NATO members) opposed the resolution on the ground that it would prejudice existing defensive arrangements. The inquiry seemed to the United States as academic, since the circumstances that had made defensive agreements necessary must cease to exist before those agreements could be ended. Ibid., 1st Cttee, 1208th mtg, 30 Nov. 1961, para. 7. The USSR, though objecting to the words "in the future", supported the resolution as a step in the right direction. Ibid., para. 17.

11 DCOR, Suppl. for Jan. 1961 to Dec. 1962, Docs. DC/201, 2 Apr. 1962 and DC/201/Add. 2, 22 Mar. 1962. In addition, a communication was received from the German Democratic Republic, Ibid., Doc. DC/201/Add. 3, 13 Mar. 1962.

"As to the conditions for adherence to the treaty mentioned by the responding Governments, that of reciprocity was most frequent. Some singled out specific States or all States within specified areas whose reciprocal adherence was required; others demanded universal adherence, including, especially, non-members of the United Nations. Some countries also called for the implementation of measures affecting the nuclear Powers, and others viewed the objective in the context of general and complete disarmament, believing that until it was achieved, national and collective security interests were likely to determine defence policy.

The three Western nuclear Powers indicated that the best solution was general and complete disarmament under effective international control and including nuclear weapons; the USSR supported the idea of nuclear-free zones, which, it felt, would contribute towards building confidence between States and reduce the threat of an outbreak of military conflicts."¹² (Emphasis added.)

No action was taken by the General Assembly on the basis of that inquiry.

Secondly, the General Assembly recommended that negotiations on GCD should be based on a joint statement of the Governments of the USSR and the United States on agreed principles for disarmament negotiations.¹³ The joint statement which was included in a report submitted to the General Assembly by the two countries on 20 September 1961 comprised two principles,¹⁴ which, though pertaining to negotiating an agreement on GCD, were particularly relevant to the NPT negotiations. One of them reads as follows :

"All measures of general and complete disarmament should be balanced so that at no stage of the implementation of the treaty could any State or

12 The United Nations and Disarmament : 1945-1970 (New York : United Nations, 1970), p. 266.

13 GA Res. 1722(XVI), Part I, 20 Dec. 1961. GAOR, 16th Sess., Anns., a.i. 19, p. 31.

14 Ibid., pp. 1-2.

group of States gain military advantage and that security is ensured 'equally for all.'¹⁵ (Emphasis added.)

The other principle, in the first sentence, runs as follows :

"All disarmament measures should be implemented from beginning to end under such strict and effective international control as would provide firm assurance that all parties are honouring their obligations."¹⁶ (Emphasis added.)

Thirdly, the General Assembly endorsed an agreement reached by the USSR and the United States on the composition of a new negotiating body on disarmament which was later called "Conference of the Eighteen-Nation Committee on Disarmament".¹⁷

The ENDC played a central role in negotiating the NPT. Its debates in the years 1962-1965 on the proliferation of nuclear weapons had provided a valuable background for the later formulation of the five principles. The same can be said of the session held by the Disarmament Commission, upon the request of the USSR,¹⁸ from 21 April to 16 June 1965. The presentation of the first American draft treaty on non-proliferation to the ENDC on 17 August 1965,¹⁹ as well as the presentation of the first Soviet draft treaty to the United Nations General Assembly at its 20th session on 24 September 1965,²⁰ had also initiated interesting discussions which equally provided a useful background for the formulation of the principles.

15 Principle 5. Ibid., p. 2.

16 Principle 6. Ibid.

17 GA Res. 1722(XVI), Part II, 20 Dec. 1961. Ibid., p. 31.

18 DCOR, Suppl. for Jan. to Dec. 1965, Doc. DC/210, 31 Mar. 1965.

19 Ibid., Doc. DC/227, Ann. 1, Sec. A(ENDC/152, 17 Aug. 1965).

20 GAOR, 20th Sess. Anns., a.i. 106, Doc. A/5976, 24 Sept. 1965.

Non-proliferation of nuclear weapons was included in the agenda of the 20th session upon the request of the USSR which attached to its request its first draft treaty.²¹ For the first time since Ireland's initiative in 1958, the first Committee of the General Assembly devoted considerable attention to the proliferation of nuclear weapons. The problem was discussed in 19 consecutive meetings of the Committee. Without going into the detailed discussions of the two draft treaties submitted by the United States and the USSR, which shall be dealt with in different parts of this study, we shall concentrate on those parts of the discussions aimed at the formulation of the guiding principles.

There were three main trends, the first represented by the United States, the second by the USSR and the third, the most dominant, by other countries, and more particularly by the eight non-aligned members of the ENDC.

The United States was of the opinion that the guiding principles for the conclusion of an agreement on non-proliferation were clearly expressed in the "Irish Resolution".²² "Any attempt to press for further agreement in the First Committee on principles or guidelines was bound to result in the reiteration of known positions; and efforts should ... be directed away from generalities and towards detailed negotiations in the Eighteen-Nation Committee."²³

Accordingly, the United States submitted a draft resolution urging the ENDC to reconvene as early as possible in order to accord special priority to continued efforts to reach agreement on a treaty to prevent the proliferation of nuclear

21 Ibid.

22 GAOR, 20th Sess., 1st Cttee, 1366th mtg, 27 Oct. 1965, para. 24.

23 Ibid., para. 27.

weapons, and to agree on other related steps to halt and turn back the nuclear arms race.²⁴

The USSR also submitted a draft resolution, the second operative paragraph of which reads as follows :

"Considers that the treaty on the non-proliferation of nuclear weapons should be based on the following main principles :

(a) States possessing nuclear weapons should undertake not to transfer to States not possessing nuclear weapons, in any manner - directly or indirectly, through third States or groups of States, or through military alliances - nuclear weapons or the right to participate in the ownership of such weapons or in the possession, control, emplacement or use of nuclear weapons; not to assist those States in the manufacture, in preparation for the manufacture, or in the testing of such weapons and not to transmit to them any information which can be used in the manufacture or use of nuclear weapons.

(b) States not possessing nuclear weapons should undertake not to devise, manufacture or prepare to manufacture nuclear weapons, either independently or jointly with other States, in their own territory or in the territory of other States, and should renounce access to nuclear weapons in any form whatsoever - direct or indirect, through third States or through groups of States."²⁵

The third trend was directed towards the necessity of formulating a set of principles detached from the provisions of the two draft treaties. The first major statement in that direction was made in the First Committee on 22 October 1965 by Mr. Ismael Fahmy, the representative of the United Arab Republic (UAR), a State member of the ENDC, who was also acting during the 20th session as a rapporteur of that Committee.²⁶

24 Ibid., Anns., a.i. 106, Doc. A/C.1/L.337, 26 Oct. 1965.

25 Ibid., Doc. A/C.1/L.338, 27 Oct. 1965.

26 UN Doc. A/C.1/PV.1359 (prov.), 22 Oct. 1965, pp. 21-35 in US ACDA, Documents on Disarmament, 1965 (Pub. No. 34, Dec. 1966) (Washington, D.C. : US Government Printing Office, 1966), pp. 485-490. Mr. Fahmy had also served as Chairman of the First Committee during the 22nd session of the

That statement, delivered a few days before the United States and USSR proposals were made, served as a spark for the formulation of the principles.

The representative of the UAR expressed the view that it was not the right approach to discuss non-proliferation of nuclear weapons on the basis of one draft, two drafts or even more. The whole question should be approached on the basis of agreed fundamental principles. The starting point, in his view, was to focus attention and to try to find agreement on the objectives behind any non-proliferation treaty.²⁷ Convinced of the soundness of that approach, he believed that an attempt should be made to find frank and real answers to the 11 following points :

- "(1) whether there is at this stage real readiness and a sincere desire to put the names of our respective Governments on a formal treaty which binds us all, nuclear and non-nuclear Powers;
- (2) whether the political atmosphere is auspicious enough for the conclusion of an international instrument of such magnitude;
- (3) that, if we are firmly dedicated to the objectives of non-proliferation of nuclear weapons, then we should have an international agreement which really, and not artificially, ensures and safeguards this goal;
- (4) if we agree on this paramount point, we should be able to agree on another basic principle, namely, that international agreement should be as tight as possible and should indeed be free of any loop-holes whatsoever;
- (5) any international treaty dealing with non-proliferation would not only take into account the interests of the nuclear Powers but should also reflect the relationship and obligations of those Powers vis-à-vis the non-nuclear Powers;

General Assembly (1967-1968) which contributed to the formulation of the final text of the NPT. He later became Minister for Foreign Affairs of Egypt from November 1973 to November 1977.

27 Ibid., p. 486.

(6) that any international agreement on non-proliferation should not be made on the assumption that it should give the nuclear Powers certain privileges at the expenses of the non-nuclear Powers, because it would then be a one-sided agreement to which many, if not the majority, would hesitate to adhere;

(7) that any international agreement should be viewed as a permanent international obligation and, as such, should not embody vague or controversial provisions which, for one reason or another, could be used by the signatories as a pretext for taking action, either individually or collectively, which would defeat its very purposes;

(8) that any international agreement on non-proliferation should not have what are known as "escape clauses", drafted in a way which weakens the agreement's importance from the very beginning, even before it is signed; otherwise it would be not a real agreement but an artificial façade to deceive world public opinion;

(9) that an international agreement on non-proliferation should be worked out in such a manner that all Powers of the world would adhere to it;

(10) that any international agreement, while preserving the nuclear status quo as it exists in the world at present, should not permit in any form whatsoever a changing of the nuclear balance; rather we expect that agreement to diminish all incentives, legitimate or otherwise, to increase the number of potential nuclear Powers;

(11) that any international treaty on non-proliferation would be a step towards reaching agreement on the prohibition of the use of, and the destruction of, all nuclear weapons".²⁸ (Emphasis added.)

The UAR representative went on to say :

"We have outlined some of the main principles which should be thoroughly discussed and agreed upon before we embark on the process of drafting any international document which deals with the non-proliferation of nuclear weapons. If we cannot agree on those basic issues and if they are not made as clear as possible, then we do not expect that it will be possible in the foreseeable future to agree on the basic points which, in all candour,

28 Ibid., pp. 486-487.

are prerequisites to any international treaty which deals with non-proliferation, if we really mean it to be as effective as possible and as widely applicable as possible."²⁹ (Emphasis added.)

The statement aroused great interest among a considerable number of delegations, especially the delegations of the other seven non-aligned members of the ENDC.³⁰ The latter, in the first informal meeting held by the eight non-aligned following the UAR statement, requested Mr. Fahmy to prepare a draft resolution which would take into consideration the eleven points raised in his statement.

Other statements in the First Committee followed the same line. The representative of Ethiopia expressed the view that the ENDC task would be made more difficult if not impossible if the Assembly did not provide it with guide-lines embodying the principles upon which there seemed to be general agreement. He cited four principles.³¹ The representative of Tanzania enumerated six features that should be embodied in any treaty on non-proliferation.³² The representative of Finland hoped that the Powers principally concerned would make an effort at the 20th session, if not on a treaty, then at least on a set of basic principles.³³

On 4 November 1965, a draft resolution was tabled by the eight non-aligned delegations.³⁴ It was introduced to the First Committee on 8 November by the representative of the UAR on

29 Ibid., p. 487.

30 The seven are Brazil, Burma, Ethiopia, India, Mexico, Nigeria and Sweden.

31 GAOR, 20th Sess., 1st Cttee, 1366th mtg, 27 Oct. 1965, paras. 33-34.

32 Ibid., 1368th mtg, 28 Oct. 1965, paras. 2-5.

33 Ibid., 1365th mtg, 27 Oct. 1965, para. 23.

34 UN Doc. A/C.1/L.339, 4 Nov. 1965.

behalf of the Eight.³⁵ The draft contained the list of the five principles already quoted above. The first four principles were included in the first draft submitted by the UAR representative to his seven colleagues. The fifth principle, principle (e), relating to the right to establish denuclearized zones, was suggested by the Mexican representative.

In introducing the eight-Power draft, the UAR representative hoped that the United States and the USSR delegations would not press their respective draft resolutions to the vote. He accordingly moved that the Committee should proceed forthwith to vote on the draft.³⁶ As the United States and the USSR were ready to yield priority to the eight-Power Draft, and as there was no objection to the UAR motion to proceed to the vote, the debate was declared closed.³⁷

The Eight-Power Draft was adopted by the First Committee, at the same meeting in which it was introduced and without discussion, by 83 votes in favour, none against and six abstentions. The countries abstaining were Cuba, France, Guinea, Mali, Pakistan and Romania.³⁸ Consequently both the United States and the USSR declared that they would not press for a vote on their respective draft resolutions.³⁹ A few days later, the draft was adopted by the General Assembly by 93 votes in favour, none against and the abstention of the same countries except for Mali which was absent.⁴⁰ One country, Albania, declared that

35 GAOR, 20th Sess., 1st Cttee, 1373rd mtg, 8 Nov. 1965, paras. 2-7.

36 Ibid., paras. 4-5.

37 Ibid., paras. 6-7.

38 Ibid., para. 10.

39 Ibid., para. 19 (United States) and para. 48 (USSR).

40 GA Res. 2028(XX), 19 Nov. 1965. GAOR, 20th Sess., Anns. (Vol. III), a.i. 106, p. 5. For the detailed results of the vote in the Assembly, see Ibid., 1382nd plen. mtg, 19 Nov. 1965, para. 20.

it was not taking part in the vote.⁴¹

The explanation of such a prompt approval of the eight-Power draft by the First Committee can be found in the introductory statement made by the UAR representative. He explained that :

"First, that in spite of the fact that the joint draft is an initiative of the eight Powers, it is the result of thorough and long negotiations, which made it possible to have an agreed draft ...

Secondly, while the eight Powers in their contacts have no doubt benefited from the advice, constructive suggestions and proposals of many countries, extensive and almost daily negotiations took place and, particularly, with the United States and the Soviet Union.

Thirdly, this is a compromise resolution ...

Fourthly, the Eight-Power draft ... is in fact a compromise draft, even as far as the eight Powers are concerned ...

Fifthly, after extensive negotiations with both the Soviet Union and the United States delegations, ... both ... endorsed the draft as it stands."⁴²

The compromise resolution, however, was not acceptable to Albania and the five abstaining countries, three of which explained, in the First Committee, the reasons for their abstentions.

Albania considered that to admit non-proliferation as a goal independently of the important problem of eliminating nuclear weapons would be the wrong approach, since it would guarantee the monopoly of certain great Powers in nuclear weaponry. The Albanian representative referred, in this context, to the Test-Ban Treaty which was designed, in to prevent the People's Republic of China from possessing nuclear weapons.⁴³

41 Ibid., paras. 8-19.

42 UN Doc. A/C.1/PV.1373 (prov.), 8 Nov. 1965, pp. 3-25 in Documents on Disarmament, 1965, p. 516.

43 GAOR, 20th Sess., 1382nd plen. mtg, 19 Nov. 1965, paras. 8-19.

As for the three abstaining countries which explained their vote, the first, Romania, considered that the resolution failed to take into account the necessity of giving priority to urgent measures of disarmament which would prevent war and reduce international tension.⁴⁴

The second country, Guinea, had abstained from voting for several reasons. It did not believe that non-proliferation of nuclear weapons was the most fundamental or the most urgent aspect of the nuclear weapons' problem. It believed that the nuclear Powers were intending merely to legalize their existing monopoly of nuclear weapons. Moreover, a NPT would be of little value without the participation of the People's Republic of China. It therefore considered the resolution as a partial and one-sided solution similar to the Test-Ban Treaty.⁴⁵

Pakistan was the only country among the three to criticise directly the five principles. Its representative could not help considering whether the compromise resolution had not been reached at the cost of substance, and whether its deliberate ambiguity did not merely reflect the postponement of difficult decisions and the evasion of questions which defied easy answers. He found the principles so vaguely worded that they sounded platitudinous, and considered that this might lead to conflicting interpretations of their general meaning.⁴⁶

Interpretations of the five principles were made by some members of the First Committee. But the first interpretations, though vague and repetitious, were made by the UAR representative on behalf of the eight co-sponsors of the resolution.

44 Ibid., 1st Cttee, 1373rd mtg, 8 Nov. 1965, para. 30.

45 Ibid., paras. 17-18.

46 Ibid., paras. 34-35. See also the Statement made by the representative of Tanzania who regretted that the principle had been stated in rather vague and ambiguous terms. Ibid., para. 41.

Their vagueness and repetitiveness were understandable and even expected in view of the delicate balance the principles represented, particularly between the Eight themselves. Consequently the origins from which the principles were drawn were not clearly stated. The five principles shall therefore be examined on the basis of their first or original interpretations as well as the early ones made during the 20th session of the Assembly. Their origins are also traced as far back as possible. This will enable us later on in this study to see how the interpretation of those principles developed and varied in the different phases of the NPT negotiations. Above all, it will enable us to use the five principles as a sound basis for analysing the Treaty's provisions.

Principle (a) :

This principle is "meant to ensure that a treaty on non-proliferation of nuclear weapons would not permit nuclear and non-nuclear Powers to proliferate these weapons, directly or indirectly, in any form."⁴⁷ It is obvious that this explanation adds nothing to what is already in the text of the resolution. The eight non-aligned members of the ENDC, in a joint memorandum on non-proliferation submitted to the ENDC on 19 August 1966, stated in connexion with principle (a) that :

"They wish to draw attention to the usefulness of clearly defined terms in order to prevent any misunderstanding or contradictory interpretation now or in the future."⁴⁸

The only two other interpretations of this principle made at the 20th session were those of the representatives of the USSR and the United States. The former explained that :

"The obvious meaning of that provision was that it was necessary to halt the spread of nuclear weapons in any possible or conceivable form, including the granting of access to nuclear weapons to the West

47 Documents on Disarmament, 1965, p. 517.

48 DCOR, Suppl. for 1966, Doc. DC/228, Ann. 1, Sec. P(ENDC/178, 19 Aug, 1966), para. 8.

German revanchists through military blocs."⁴⁹

The American representative stated that :

"The United States draft treaty left no loop-holes that would permit any such proliferation. It would bar any action, either direct or through the indirect route of a military alliance, which would result in an increase in the total number of entities having independent powers to use nuclear weapons; no proposal which the United States had considered in NATO would place control of nuclear weapons, or information on their manufacture, in the hands of any non-nuclear country. Operative paragraph 2 (a) was therefore compatible with the United States position."⁵⁰

These two interpretations were indicative of the origins of this principle. The question of loop-holes was originally closely associated with the plans for nuclear sharing within NATO and more particularly the American proposal for establishing the MLF. The USSR was of the view that the first American draft treaty of 17 August 1965 permitted the establishment of a multilateral nuclear force which would have allowed the Federal Republic of Germany to have access to nuclear weapons. Without going into the details of this aspect, which is analysed in Part II of this study, the following statement made by the representative of the USSR in the ENDC, commenting on the first American draft of 17 August 1965, used the term "loopholes" in close conjunction with military alliances. The statement goes as follows :

"The Soviet Union sees in an agreement on the non-dissemination of nuclear weapons a practical means of really stopping the process of the continuous extension of access to nuclear weapons, whether through the emergence of new nuclear Powers possessing their own nuclear weapons, or through access to them in the form of participation in collective ownership, collective use or collective control of them within the framework of a military alliance

49 GAOR, 20th Sess., 1st Cttee, 1373rd mtg, 8 Nov. 1965, para. 45.

50 Ibid., para. 20.

or in any other way. Only such a solution to the question of the non-dissemination of nuclear weapons - one does not allow of any loopholes or exceptions - is of any value for the cause of peace. We have insisted, we⁵¹ insist and we shall continue to insist on this." (Emphasis added.)

In Part II of this study, we shall focus our attention on articles I and II as far as principle (a) is concerned. Those two articles were lengthily negotiated between the United States and the USSR in order to preclude any possibility of loopholes, especially those which could lead to the proliferation of nuclear weapons through military alliances. This does not mean the neglect of the rest of the NPT as far as loopholes are concerned. Many of the countries participating in the NPT negotiations had their own views as to the meaning of a loophole. Their views shall be referred to in different parts of this study, as long as they were more related to the application of one of the other main principles. To cite one example, the representative of India, commenting on the absence of article III relating to "International Control" in the first two identical treaty drafts submitted to the ENDC on 24 August 1967 by the United States and the USSR,⁵² said :

"There will be in fact a real and dangerous loophole if there is no satisfactory control to ensure observance of the provisions in the present draft that the nuclear weapon Powers should not transfer nuclear weapons or control over such weapons directly or indirectly, and that non-nuclear weapon Powers should not receive such weapons or assistance in their manufacture ... When there is so much talk of loopholes and of stringent provisions of control of manufacture of weapons, and that also in a discriminatory manner, it is worth remembering that there is equal, if not greater, justification for effective provisions to ensure that there is no dissemination of weapons or

51 ENDC/PV.228, 31 Aug. 1965, p. 35.

52 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 6 (ENDC/192, 24 Aug. 1967) and Sec. 8 (ENDC/193, 24 Aug. 1967).

weapon technology from a nuclear weapon Power to any other country."⁵³ (Emphasis added.)

It is evident that the absence of "international control" would be considered as a serious loop-hole. Inspection was viewed by India as well as by many others as a means of ensuring the effectiveness of the treaty. Therefore, as demonstrated below in this chapter, it was preferred in the analysis of article III of the NPT to be guided by the fourth principle of General Assembly Resolution 2028(XX) stipulating that "(t)here should be acceptable and workable provisions to ensure the effectiveness of the treaty".

Principle (b) :

In introducing principle (b), on behalf of the eight non-aligned States, the representative of the UAR said that :

"It is abundantly clear from the consensus of the general debate in this Committee that the very nature, scope and import of the treaty and the future of both nuclear and non-nuclear Powers make it necessary that the legal, political and other obligations arising from the treaty should constitute an acceptable balance of mutual responsibility and obligation between the nuclear and non-nuclear Powers. It should represent a new era of partnership, of obligations and responsibilities. Otherwise, the treaty provisions would lack the main force necessary for its validity. No treaty on non-proliferation should be drafted on the assumption that it takes care only of the interests of the nuclear Powers. This is what paragraph 2B is meant to convey. I may add, at this stage, that the wide acceptance of this draft could be considered as the first step in implementing the spirit of paragraph 2B."⁵⁴

Several interpretations were made of this principle at the 20th Session of the Assembly. The following three examples reflect a mixture of worries about security and disarmament measures.

53 ENDC/PV.334, 28 Sept. 1967, paras. 36-37.

54 Documents on Disarmament, 1965, p. 517.

The Algerian representative said that :

"Any treaty on non-proliferation should include a specific and formal undertaking by the nuclear Powers not to use their atomic weapons and not to exert any pressure, political or military, based on the possession of such weapons. It was in that sense that his delegation understood operative paragraph 2 (b) of the draft resolution."⁵⁵

The Nigerian representative, also worried about security requirements of non-nuclear weapon States, stated the following :

"If nuclear Powers really desired agreement, and expected the non-nuclear Powers to forswear for ever the right to acquire nuclear weapons, they must be prepared to pay the reasonable price asked by the non-nuclear States. Perhaps a line would have to be drawn between the security requirements of those non-nuclear Powers which were members of alliances which included nuclear Powers and those of non-nuclear Powers which were not.

His delegation took some comfort from the thought that operative paragraph 2 (b) of the draft resolution, although less explicit than might have been desired, would permit further discussion of that question at Geneva ..."⁵⁶

Commenting also on principle (b), the representative of the Democratic Republic of the Congo said that :

"In his delegation's view, the responsibilities of the nuclear Powers should be to refrain from manufacturing additional weapons, to start the destruction of existing stockpiles and to reconvert the producing industries. The main effort had to come from the nuclear Powers, since it was they who possessed the weapons and could use them, the adoption of such measures by the nuclear Powers would strengthen the case for the adoption by the non-nuclear States of unilateral declarations of non-acquisition of nuclear weapons."⁵⁷

55 GAOR, 20th Sess., 1st Cttee, 1373rd mtg, 8 Nov. 1965, para. 14.

56 Ibid., paras. 28-29.

57 Ibid., para. 51.

One country, Pakistan, which abstained from voting on the resolution, was sceptical about the idea of a balance of mutual responsibilities and obligations of the nuclear and non-nuclear Powers as advocated by another country. Its representative said that :

"With regard to operative paragraph 2 (b), one representative had stated in the General Assembly that the only practical approach to the problem of proliferation was for the non-nuclear Powers to renounce the production, acquisition, control of, and access to nuclear weapons, while the nuclear Powers simultaneously undertook to refrain from producing nuclear weapons and delivery vehicles and to reach agreement on the reduction of existing stockpiles. If that was the idea reflected in operative paragraph 2 (b), the Committee was taking a retrograde step in endorsing it. Pending agreement between the nuclear Powers on nuclear disarmament, the question of preventing other countries from acquiring, manufacturing, or preparing to manufacture nuclear weapons should be considered separately from all other questions of disarmament, as a matter of highest importance."⁵⁸

Apparently the delegate of Pakistan was referring to a statement made by Sardar Swaran Singh, the Minister for External Affairs of India, during the general debate in the General Assembly.⁵⁹

The United States held almost the same view as Pakistan. While sympathizing with the feeling of many non-nuclear States that there should be a balance between the obligations assumed by the respective groups under the treaty and while stating that the principle was directed essentially to the association of a non-proliferation treaty and various collateral measures, the United States was of the view that "it was important, however, not to permit the absence of agreement on any one measure

⁵⁸ Ibid., para. 36.

⁵⁹ Ibid., 1358th plen. mtg, 12 Oct. 1965, para. 72.

to interfere with progress on any other."⁶⁰

It was obvious then that principle (b) was already raising a controversy over its meaning and future application. And though the principle reflected the wishes of the non-nuclear States, as rightly stated by the representative of Cyprus,⁶¹ those States were divided on its interpretation. Even the eight non-aligned members of the ENDC, as early as 1965, had already developed different approaches to non-proliferation. A carefully worded joint memorandum submitted by the Eight to the ENDC on 15 September 1965, placing on record their basic approach to non-proliferation, reflected their differences. The joint memorandum can be considered as the immediate origin of principle (b). The relevant paragraph stated that :

"The eight delegations are convinced that measures to prohibit the spread of nuclear weapons should ... be coupled with or followed by tangible steps to halt the nuclear arms race and to limit, reduce and eliminate the stocks of nuclear weapons and the means of their delivery."⁶² (Emphasis added.)

The phrase "coupled with or followed by" was introduced to draw a balance between those who were advocating that a non-proliferation treaty should be coupled at the same time with other measures, like India and Sweden,⁶³ and those who - while hoping that this could be realized - had felt, however, that an alternative should not be disregarded.

60 Ibid., 1st Cttee, 1373rd mtg, 8 Nov. 1965, para. 21.

61 Ibid., 1372nd mtg, 5 Nov. 1965, para. 5.

62 DCOR, Suppl. for Jan. to Dec. 1965, Doc. DC/227, Ann. 1, Sec. E(ENDC/158, 15 Sept. 1965), para. 3.

63 India suggested during the 1965 session of the Disarmament Commission an integrated solution of the problem of proliferation comprising 5 elements. See DCOR, 75th mtg, 4 May 1965, para. 35 in Documents on Disarmament, 1965, p. 148. As for Sweden, it advocated a package linking a non-proliferation agreement with a comprehensive test ban and a cutoff of fissionable materials' production. DCOR, 77th mtg, 10 May 1965, para. 74.

"Tangible steps" were later enumerated in their second joint memorandum on non-proliferation, referred to above, submitted to the ENDC on 19 August 1966. They were enumerated in the following manner :

"The eight delegations have individually put forward a number of suggestions as to such tangible steps, including a comprehensive ban of nuclear weapon testing, a complete cessation of production of fissionable material for weapon purposes, both in themselves effective non-proliferation measures, a freeze and a gradual reduction of the stocks of nuclear weapons and the means of their delivery, the banning of the use of nuclear weapons and assurance of the security of non-nuclear weapon States. Such different steps could be embodied in a treaty as part of its provisions or as declaration of intention."⁶⁴ (Emphasis added.)

The second joint memorandum not only preserved a balance between the different approaches but also went further than the first joint memorandum in reflecting the view of some that other measures should become part of the treaty and not merely coupled with it. The second memorandum also reflected the differences among the Eight in their preferences for other tangible steps.

However, what the nuclear-weapon States should have accomplished or were asked to accomplish in the field of arms control and disarmament will not be treated in Part III of this study relating to the application of principle (b). Although closely connected with that principle, it is more appropriate to study arms control and disarmament in Part IV of this study relating to the application of principle (c). In Part III, we will treat rather three issues which later became very much identified with the application of principle (b). They are the peaceful uses of nuclear energy; peaceful nuclear explosions

⁶⁴ Ibid., Suppl. for 1966, Doc. DC/228, Ann. 1, Sec. P(ENDC/178, 19 Aug. 1966), para. 13.

and security guarantees.⁶⁵

Principle (c) :

In introducing principle (c), the representative of the UAR said :

"As to paragraph 2 C, it is self-explanatory. However, it should be clear that a treaty on the non-proliferation of nuclear weapons is not an end in itself, but must lead to further steps towards the realization of general and complete disarmament, gradually dispensing with nuclear weapons in order to achieve complete nuclear disarmament."⁶⁶

The principle was, as pointed out, self-explanatory. It did not raise any direct comments in the First Committee. The principle originated directly from the 1965 Eight non-aligned joint memorandum on non-proliferation. The memorandum states that :

"A treaty on non-proliferation of nuclear weapons is not an end in itself but only a means to an end. That end is the achievement of General and Complete Disarmament, and, more particularly, nuclear disarmament."⁶⁷

In their 1966 joint memorandum on non-proliferation, the Eight interpreted principle (c) as emphasizing that the treaty should be "an integral part of the process of disarmament."⁶⁸

The principle is closely related to principle (b) as far as the type of balanced responsibilities and obligations in disarmament, and more particularly nuclear disarmament, is concerned. Can the NPT be considered, as it has finally materialized, as a step towards that goal ? Was it coupled with or

65 See Articles IV and V of the NPT and Security Council Resolution 255 of 19 June 1968.

66 Documents on Disarmament, 1965, p. 517.

67 DCOR, Suppl. for Jan. to Dec. 1965, Doc. DC/227, Ann. 1, Sec. E(ENDC/158, 15 Sept. 1965), para. 3.

68 Ibid., Suppl. for 1966, Doc. DC/228, Ann. 1, Sec. P(ENDC/178, 19 Aug. 1966), para. 10.

followed by other measures of arms control or disarmament ?
What sort of specific problems were contemplated as most amenable to solution ?

These are the kinds of questions we shall try to answer in Part IV of this study, in the application of principle (c) to the NPT and more specifically to article VI of the treaty.

Principle (d) :

In introducing this principle, the representative of the UAR said, on behalf of the Eight, that :

"Any treaty on the non-proliferation of nuclear weapons has to be an effective instrument if it is really intended to be an instrument of peace. That is why, in paragraph 2 D, the joint draft resolution speaks of 'acceptable and workable provisions' to be embodied in the treaty to ensure its effectiveness. As members are aware, some of the ideas that may come to mind in this connexion are mentioned in certain proposals which are before the Committee. But this does not foreclose other ideas or proposals aimed at ensuring the effectiveness of the treaty."⁶⁹

The proposals referred to in this statement were not identified, at the time, by any of the co-sponsors of the resolution. Many of the proposals and suggestions made before the First Committee or elsewhere could be considered in one way or another as contributing to the effectiveness of a non-proliferation treaty. That the treaty be void of loop-holes, ensure the security of non-nuclear weapon States and lead to disarmament - these were all proposals that could be considered as contributing to the effectiveness of a treaty. But, as referred to above, those proposals are covered by the three previous principles of General Assembly resolution 2028(XX).

The effectiveness of the treaty was more directly related to the question of inspection. The United States representative,

⁶⁹ Documents on Disarmament, 1965, pp. 517-518.

commenting on principle (d) in the First Committee, was rightly relating effectiveness to inspection, when he expressed his regret that the principle "failed to reflect more clearly the wide support voiced in the First Committee for the application of IAEA or equivalent international safeguards to peaceful nuclear activities."⁷⁰

The 1966 joint memorandum of the non-aligned shed some light on the Eight's conception of principle (d). It stated that :

"Principle (d) requires that there should be workable provisions to ensure the effectiveness of the treaty. The eight delegations consider that such provisions should guarantee compliance with the obligations of the treaty. They, furthermore, believe that an essential provision to ensure the effectiveness of the treaty, not least in the context of the undertakings on further steps towards disarmament ..., would be that, of making the treaty subject to periodic reviews."⁷¹ (Emphasis added.)

The principle of universality of adherence to the Treaty, right of withdrawal, duration and amendments are also questions that could be considered as being closely related to the application of principle (d).

Therefore, Part V of this study will analyse the effectiveness of the Treaty on the basis of the following criteria :

- International Safeguards
- Universality of Adherence
- Adaptability to changing circumstances

The analysis will entail the discussion of Articles III, VIII, IX, X and XI of the NPT.

70 GAOR, 20th Sess., 1st Cttee, 1373rd mtg, 8 Nov. 1965, para. 22.

71 DCOR, Suppl. for 1966, Doc. DC/228, Ann. 1, Sec. P(ENDC/178, 19 Aug. 1966), para. 14.

Principle (e) :

In introducing the fifth and last principle, the UAR representative stated that :

"Paragraph 2 E is really a desirable addition to the principles cited in paragraph 2. It complements them, and we believe that if it is respected and carried out it will doubtless add to the effectiveness of the treaty. It is, therefore, a very commendable principle supported by many delegations in this Committee."⁷²

Moreover, the eight non-aligned members of the ENDC in their 1966 joint memorandum on non-proliferation stated the following :

"The eight delegations find principle (e) of great interest to countries in some regions where it is possible to reach agreement on a treaty on denuclearization, which is in itself a measure of non-proliferation. They trust that there will be no difficulty in embodying a provision corresponding to this principle in the text of a treaty on non-proliferation."⁷³

The principle was in fact an addition to the four previous principles. It was added, as already mentioned, upon the request of Mexico at the informal meeting held by the Eight to finalize their draft resolution.

The Mexican Representative had also made a statement in the First Committee, a few days before the introduction of the eight-Power Draft, in which he considered that any draft treaty on non-proliferation drawn up by the United Nations should contain a provision drafted along the following line :

"This treaty shall be without prejudice to the right of any group of States to conclude regional treaties designed to ensure the total absence of nuclear weapons and launching devices for such weapons in the respective territories of the States members of the group."⁷⁴

72 Documents on Disarmament, 1965, p. 518.

73 DCOR, Suppl. for 1966, Doc. DC/228, Ann. 1, Sec. P(ENDC/178, 19 Aug. 1966), para. 15.

74 GAOR, 20th Sess., 1st Cttee, 1369th mtg, 29 Oct. 1965, para. 13.

The interest that Mexico had shown for the addition of principle (e) and the inclusion of an article in the text of a future NPT was understandable. By 1965, the Latin American countries were already deeply involved in the process of establishing a denuclearized zone in their continent. On 29 April 1963, the Presidents of Bolivia, Brazil, Chile, Ecuador and Mexico issued a joint declaration announcing that "their Governments are prepared to sign a multilateral Latin American agreement whereby their countries would undertake not to manufacture, receive, store or test nuclear weapons or nuclear launching devices ..."⁷⁵ The United Nations General Assembly at its 18th session in 1963 adopted a resolution approving the idea.⁷⁶ A major step that followed was the establishment of a "Preparatory Commission" on 27 November 1964 by the "Preliminary Meeting on the Denuclearization of Latin America" held in Mexico City from 23 to 27 November 1964.⁷⁷ The "Commission" which had held four sessions succeeded in drafting a treaty which was open for signature on 14 February 1967.⁷⁸ The treaty came to be widely known and referred to as the "Treaty of Tlatelolco", a district of Mexico City.

Principle (e), however, was of interest not only to States which were in the process of negotiating a denuclearized zone, such as the Latin American States, but also to States which were still contemplating doing so, such as the African States.

Several African States were prompted in this field, even earlier than the Latin American States, by the detonation of

75 Ibid., 18th Sess., Anns. (Vol. III), a.i. 74, Doc. A/5415/Rev. 1, 14 Nov. 1963.

76 GA Res. 1911(XVIII), 27 Nov. 1963. Ibid., pp. 3-4.

77 For the final Act of the Preliminary Meeting, see UN Doc. A/5824, 3 Dec. 1964.

78 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 2(ENDC/186, 21 Feb. 1967).

France's first atomic device in the Algerian Sahara on 13 February 1960. It was only in November 1961 that they succeeded in securing a resolution from the General Assembly aimed at considering and respecting Africa as a denuclearized zone.⁷⁹ In 1964, the Assembly of African Heads of State and Government of the OAU, at its first regular session, held in Cairo from 17 to 21 July 1964, issued a declaration on the denuclearization of Africa in which they announced their readiness to undertake in an international treaty, to be concluded under the auspices of the United Nations, not to manufacture or acquire control of nuclear weapons.⁸⁰ In 1965, an item entitled "Declaration on the denuclearization of Africa" was included in the agenda of the 20th session of the General Assembly upon the request of 34 African States.⁸¹ At that session, the Assembly adopted a resolution endorsing the African declaration and calling upon all States to respect the declaration and conform to it.⁸²

Part VI of this study will deal with the formulation of Article VII of the NPT which embodies principle (e) in similar terms. Then, without overlooking the different achievements and proposals pertaining to the establishment of denuclearized zones in different parts of the world, some aspects of the Treaty of Tlatelolco will be treated in order to demonstrate the issues and problems which can also confront the establishment of future denuclearized zones.

In the latter phases of the NPT negotiations in the ENDC,

79 GA Res. 1652(XVI), 24 Nov. 1961. GAOR, 16th Sess. Anns. (Vol. III), a.i. 72 and 73, p. 17.

80 For the text of the declaration, see Ibid., 20th Sess., Anns., a.i. 105, Doc. A/5976, 23 Sept. 1965.

81 Ibid., Doc. A/6127, 2 Dec. 1965, para. 1.

82 GA Res. 2033(XX), 3 Dec. 1965. Ibid., pp. 3-4.

two proposals aimed at explicitly referring to General Assembly resolution 2028 in the preamble of the NPT.

The first proposal was made by Romania on 19 October 1967.⁸³ In a working paper containing amendments and additions to the first identical draft treaties submitted by the United States and the USSR to the ENDC on 24 August 1967,⁸⁴ Romania proposed the enumeration of the five principles of resolution 2028 in the fourth preambular paragraph of the identical drafts which was simply referring, in general terms, to General Assembly resolutions calling for the conclusion of an agreement on "the prevention of wider dissemination of nuclear weapons".⁸⁵ (Emphasis added.)

The second proposal was made by the representative of the UAR in the course of the debate that followed the presentation of the revised identical draft treaties of 18 January 1968.⁸⁶ Prompted by the Romanian proposal, the representative of the UAR suggested that the fourth preambular paragraph should be redrafted to read as follows :

"In conformity with the resolutions of the General Assembly and notably resolution 2028(XX) calling for the conclusion of an agreement on the prevention of any further proliferation of nuclear weapons

83 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 14(ENDC/199, 19 Oct. 1967).

84 Ibid., Sec. 6(ENDC/192, 24 Aug. 1967) and Sec. 8(ENDC/193, 24 Aug. 1967).

85 The use of the term "dissemination" instead of "proliferation" in the fourth preambular paragraph might leave the impression that the authors of the two identical drafts had intended to emphasize the prominence of earlier resolutions on non-proliferation which were all entitled, including the "Irish Resolution" of 1961, "(p)revention of the wider dissemination of nuclear weapons".

86 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 7(ENDC/192/Rev. 1, 18 Jan. 1968) and Sec. 9(ENDC/192/Rev. 1, 18 Jan. 1968).

and enunciating the general principles of such an agreement".⁸⁷ (Emphasis added.)

The representative of the UAR hoped that the mention of resolution 2028, considered in some way the charter of non-proliferation, would contribute to the proper implementation and sound interpretation of the treaty.⁸⁸

The United States mildly objected to the two proposals in the following terms :

"The co-Chairmen⁸⁹ have made clear several times the importance which they attached to this resolution in formulating their drafts, and have also dwelt at length on the extent to which the present draft accords with its principles. As the Committee knows, however, the resolution has been subject to interpretations about which some controversy unfortunately has arisen. At this stage in our work, I am convinced that we would not risk transferring this controversy about interpretation to the treaty itself by making the changes which the representatives of the United Arab Republic and Romania proposed. In any event, the present fourth preambular paragraph encompasses this and other⁹⁰ equally important General Assembly resolutions."⁹⁰

It is obvious from that statement that in rejecting the Romanian and UAR proposals, the United States was not contesting the value and importance of resolution 2028. Even earlier in the debate, when the United States introduced to the ENDC its first identical draft of 24 August 1967, its representative explained that the draft was based not only upon resolution 2028, but also upon the principles enunciated by the Eight in their 1966 joint memorandum on non-proliferation,⁹¹ which

87 ENDC/PV. 367, 20 Feb. 1968, para. 8.

88 Ibid., para. 7.

89 The two co-Chairmen of the ENDC were the representatives of the United States and the USSR.

90 ENDC/PV. 370, 27 Feb. 1968, para. 88.

91 ENDC/PV. 325, 24 Aug. 1967, para. 7.

contained their interpretation of the five principles that they co-drafted in 1965.

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To sum up, the five main principles of General Assembly resolution 2028 were the result of an initiative which spontaneously drew from past experience. They could be considered as a natural result of non-proliferation efforts since Ireland first brought the issue, as distinct from other issues, before the United Nations in 1958. The principles, which borrowed from American, Soviet and non-aligned sources, are the result of a compromise. They were the prerequisites for the conclusion of a non-proliferation treaty. Resolution 2028 does not detract from the value of the "Irish Resolution". On the contrary, they supplement each other. While the latter stands as an instrument for defining a non-proliferation concept, the former is instrumental in trying to formalize that concept in a treaty based on certain basic principles.

The principles followed the presentation of the first two draft treaties submitted by the United States and the USSR in 1965. The two drafts had to be, therefore, reconsidered from new perspectives paying full attention to resolution 2028.⁹² The principles were to play an important role in NPT negotiations. Their role was enhanced by the varied interpretations given to them in the course of the negotiations, as to their meaning and application. The failure to make in the NPT specific reference to the principles or to resolution 2028 as a

92 For the views of the eight non-aligned on this, see their 1966 joint memorandum on non-proliferation. DCOR, Suppl. for 1966, Doc. DC/228, Ann. 1, Sec. P(ENDC/178, 19 Aug. 1966), para. 4.

whole does not detract from their value as guiding criteria for treaty analysis. It was even claimed by the two main co-authors of the NPT, the United States and the USSR, that the NPT was based upon the five principles.

Each of the following five Parts of this study will correspond to a principle. This does not necessarily mean a rigid separation of the principles in their application to the treaty. They are very much inter-related and consequently each might be referred to in more than one part.

However, before analysing the Treaty's provisions, a third and last chapter in Part I will be devoted to an outline of the different phases of the NPT negotiations within and outside the United Nations since the establishment of the ENDC in 1961. It shall also highlight the major problems encountered in the process of the Treaty's formulation.

CHAPTER 3

The Formulation of the Treaty : GA Resolution 2373(XXII)

With the formulation of a non-proliferation concept in 1961 and the formulation of the guiding principles in 1965, as well as the presentation in the same year of the two draft treaties by the United States and the Soviet Union, negotiations on a treaty had entered a new and active phase.

The treaty as it finally materialised is the fruit of long and arduous negotiations within and outside the United Nations. Negotiations and discussions took place in the General Assembly of the United Nations, the First Committee of the Assembly entrusted with political matters, the UN Disarmament Commission, the Conference of the Eighteen-Nation Committee on Disarmament (ENDC) and the Conference of Non-Nuclear-Weapon States. NATO, Euratom and the International Atomic Energy Agency (IAEA) are the main forums where the Treaty or certain aspects of it were negotiated and discussed and will continue to be discussed in the phase of its implementation. Western European countries of the European Economic Community (EEC) and the Western European Union, Warsaw Pact countries, non-aligned States, and many other States such as the Latin American States, which had succeeded in drafting a Treaty on the denuclearization of their continent, played a role in one way or another in the history of the Treaty-making. Bilateral and multilateral negotiations outside the United Nations and other governmental organizations were, at different stages of the elaboration of the Treaty, the centre of all activity. Bilateral consultations were taking place sometimes on a weekly and even on a daily basis.

In many countries, public opinion strongly favoured the conclusion of the NPT, but at times was divided in countries having special problems of their own. Non-governmental groups were also very active in educating the public on the problem of nuclear weapons' proliferation such as the United Nations national associations and private institutions interested in promoting peace and security through dialogue.¹ The International Conferences on Science and World Affairs, commonly known as Pugwash Conferences, had also contributed to a better understanding of the technical and scientific issues related to disarmament and arms control measures.²

The ENDC was a focal point in the negotiations. It was the crossroads for the resolutions of the General Assembly and the Disarmament Commission, of the several treaty drafts negotiated elsewhere, and of numerous proposals which were introduced to the Conference not only by its members, but also from non-participants who wanted their views to be taken into consideration.³

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- 1 For example, see Alastair Buchan (Ed.), A World of Nuclear Powers ? (Englewood Cliffs, N.J. : Prentice-Hall, 1966). The volume was initially prepared for the International Assembly on Nuclear Weapons, a co-operative undertaking of the Canadian Institute of International Affairs (Toronto), the Institute for Strategic Studies (London), Carnegie Endowment for international Peace and the American Assembly. See the final report of the International Assembly which was held in the month of June 1966 in Scarborough, Ontario, Canada in Survival, Vol. VIII, No. 9, Sept. 1966, pp. 278-281.
 - 2 See J. Rotblat, Pugwash - The First Ten Years (London : Heinman, 1967). See also Leonard E. Schwartz, "Perspective on Pugwash", International Affairs (London), Vol. 43, No. 3, July 1967, pp. 498-515. The Pugwash Continuing Committee publishes the quarterly Pugwash Newsletter and organizes symposia on specific problems such as the proliferation of nuclear weapons. See C.F. Barnaby (Ed.), Preventing the Spread of Nuclear Weapons (London : Souvenir Press, 1969) (Pugwash Monograph I). Pugwash activities are also reported in the Bulletin of the Atomic Scientists.
 - 3 See DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 21(ENDC/204, 24 Nov. 1967 (Switzerland)) and Sec. 35(ENDC/219, 27 Feb. 1968 (Spain)). See also the

The Conference had also received communications from non-governmental organizations.

Since the establishment of the ENDC in 1961, negotiations on the NPT went through two phases. The first phase, marked by the conclusion of the Test-Ban Treaty, ran from 14 March 1962, the inaugural day of the ENDC, to 16 June 1965 when the UN Disarmament Commission terminated its 1965 session held in New York upon the request of the Soviet Union. The second and active phase on non-proliferation ran from the summer of 1965 and the presentation on 17 August 1965 of the first American treaty draft to the ENDC to 5 March 1970, when the treaty entered into force. Its entry into force was again the beginning of an intensive new round of negotiations on certain aspects of the Treaty, in a phase of implementation. This last phase is integrated in the following parts of this study related to the analysis of the Treaty. But before tracing the first two phases, special attention should be given to the ENDC as an organ which was at the centre of NPT negotiations.

I. The Conference of the Eighteen-Nation Committee on Disarmament

Establishment and Composition

By 1958 the United States and the Soviet Union leaned towards the establishment of a conference machinery on disarmament

two memoranda of the Government of the Federal Republic of Germany (FRG) in US ACDA, Documents on Disarmament, 1967 (Pub. No. 46, July 1968) (Washington, D.C. : US Government Printing Office, 1968), pp. 179-182, and US ACDA, Documents on Disarmament, 1968 (Pub. No. 52, Sept. 1969) (Washington, D.C. : US Government Printing Office, 1969), pp. 152-155. The two memoranda were informally transmitted to ENDC members. The German Democratic Republic (GDR) had also made its views known to the members of the ENDC through the Soviet delegation. For example, see ENDC/151, 10 Aug. 1965. In such cases the United States delegation considered GDR's views as communications from a non-governmental organisation submitted as such by the Soviet Union. For example, see ENDC/PV. 222, 10 Aug. 1965, p. 10.

ment, on an ad hoc basis, linked to but not an integral part of the United Nations. The composition of the new forum reflected, at that time, the claim of the Soviet Union for parity of representation with the West.⁴ The Conference of the Ten-Nation Committee on Disarmament established in 1959 was the last ad hoc body with an East-West parity representation. The ten members were Bulgaria, Czechoslovakia, Poland, Romania, and the Soviet Union on the Eastern side; and Canada, France, Italy, the United Kingdom, and the United States on the Western side.⁵

By 1960 the non-aligned countries had won for themselves a prominent position in the United Nations on matters of disarmament. Their new position was effectively demonstrated at the fifteenth session of the General Assembly (1960-1961) when the non-aligned opposition to any move which could give the impression that the Assembly approved the position of one side or the other resulted in the Assembly's failure to adopt a whole sheaf of draft resolutions on disarmament.⁶ The non-aligned countries had also made practical contribution to the peace-keeping effort of the United Nations and to ad hoc international Conferences. Moreover the failure of the Conference of the Ten-

4 For a brief summary of the evolution of the negotiating machinery on disarmament, see The United Nations and Disarmament : 1945-1970, pp. 2-5.

5 DCOR, Suppl. for Jan. to Dec. 1959, Doc. DC/144, 8 Sept. 1959, Ann., para. 1.

6 Arthur S. Lall, Negotiating Disarmament. The Eighteen-Nation Disarmament Conference : The First Two Years, 1962-1964 (Ithaca, New York : Center for International Studies, Cornell University, 1964) (Cornell Research Papers in International Studies II), p. 3, hereinafter cited as Negotiating Disarmament. Besides the "Irish Resolution" of 1960 and a resolution on suspension of nuclear and thermo-nuclear tests, the Assembly had merely adopted a resolution deciding to take up for consideration at its sixteenth session the problem of disarmament and all pending proposals relating to it. See GAOR, 15th Sess., Anns. (Vol. II), a.i. 67, 86, 69 and 73, pp. 27-28.

Nation Committee on Disarmament⁷ proved the sterility of the direct confrontation type of negotiations between the United States and the Soviet Union.⁸

Among the victims of the General Assembly's failure to adopt a whole series of draft resolutions on disarmament during its fifteenth session was a Soviet draft resolution suggesting the broadening of the membership of the Ten-Nation Committee to include in addition to the ten members, India, Indonesia, the UAR, Ghana and Mexico.⁹

The first Conference of Heads of State or Government of Non-Aligned Countries held in Belgrade in September 1961 had considered, in its 6 September declaration, that the non-aligned nations should be represented in all future world Conferences on disarmament.¹⁰

After four months of bargaining,¹¹ the United States and the Soviet Union indicated on 13 December 1961 to the UN General Assembly that they had reached an agreement on the

7 See note 39 in Chapter 1.

8 Arthur S. Lall, "The nonaligned in Disarmament Negotiations", Bulletin of the Atomic Scientists, Vol. XX, No. 5, May 1964, pp. 17-18. Mr. Lall, who was the Indian permanent representative to the UN, explained that in 1957 there was an unsuccessful trial, in which he took part, to work out with the United States and the Soviet Union representatives the composition of a disarmament body with a participation of countries varying from 21 to 25.

9 GAOR, 15th Sess., Anns. (Vol. II), a.i. 67, 86, 69 and 73, Doc. A/4509, 26 Sept. 1960. The Western Powers rejected the suggestion, principally because the addition of five non-aligned nations could give the impression of accepting the Soviet "troïka" concept. See Jacobson and Stein, op. cit., p. 357.

10 The Conference of Heads of State or Government of Non-Aligned Countries, Belgrade, September 1-6, 1961 (Beograd : Publicističko-Izdavački Zavod "Jugoslavijska", 1966), p. 259.

11 M. Samir Ahmed, "The Role of Neutrals in the Geneva Negotiations", Disarmament and Arms Control, Vol. I, No.1, Summer 1963, p. 20.

composition of the ENDC.¹² On 20 December 1961, the agreement was endorsed unanimously by the Assembly.¹³ The membership comprised the ten previous members of the Ten-Nation Committee and eight additional countries : Brazil, Burma, Ethiopia, India, Mexico, Nigeria, Sweden and the UAR. The Assembly had also recommended that the ENDC, as a matter of urgency, should undertake negotiations with a view to reaching, on the basis of the joint statement of agreed principles,¹⁴ agreement on General and Complete Disarmament (GCD) under effective international control. France, a member of the defunct Ten-Nation Committee, disassociated itself from the ENDC. President de Gaulle explained France's position in a letter to Chairman Khrushchev on 18 February 1962. He made it clear that France would only participate in talks that would be between the nuclear Powers and that would have as their immediate goal the destruction, the ban and control of all means of delivery of nuclear weapons.¹⁵

The choice of the additional 8 members raised problems concerning their number, identity and status in the Conference. The number was a compromise that took into consideration the desired compactness of a negotiating forum conducive to orderly

12 GAOR, 16th Sess. Anns., a.i. 19, Doc. A/4980/Add. 2, 14 Dec. 1961, para. 4. Earlier in the same session the Assembly had urged the two countries to reach an agreement that could be regarded as satisfactory. GA Res. 1660(XVI), 28 Nov. 1961, Ibid., pp. 30-31.

13 GA Res. 1722(XVI), 20 Dec. 1961, Ibid., p. 31.

14 See note 13 in Chapter 2.

15 The New York Times, 20 Feb. 1962. It is to be noted that France's absence in the ENDC led to some confusion as to the composition of the ENDC. Reference to the Conference was frequently made as the 17-Nation Committee. But the fact remained that it was an 18-Nation Committee. France's seat was reserved at all time and it could have joined upon its own decision. There had been informal moves to bring France to the Conference table but there was no change in France's position. See Lall, Negotiating Disarmament, p. 16.

and manageable negotiation. At the same time, it was large enough to accommodate the differences between East and West on the identity and nature of the Eight.¹⁶ India, Mexico and the UAR were previously suggested by the Soviet Union in 1960. Sweden and Brazil were added upon a United States request. Burma, Ethiopia and Nigeria comprised the final element of the compromise. They were considered by the United States less anti-Western than Ghana and Indonesia which were originally proposed by the Soviet Union in 1960.¹⁷ Practical considerations also seem to have influenced the choice of some of the Eight which were looked upon as potential nuclear Powers.¹⁸ As to their status in the Conference, the Eight were full members as the Soviet Union had advocated and not merely observers as the United States reportedly had preferred.¹⁹ However, full membership did not mean the same thing as in United Nations organs and subsidiary organs.²⁰ At the beginning, the Soviet Union had called the Eight the "neutral" or "non-committed" members. The United States had preferred to call them the "eight new members", chosen to represent different geographic regions of the world.²¹ Later, the term "non-aligned", which was used by the Eight themselves, was well-established. In

16 M. Samir Ahmed, The Neutrals and the Test Ban Negotiations : An Analysis of the Non-aligned States' Efforts between 1962-1963 (New York : Carnegie Endowment for International Peace, Feb. 1967) (Occasional Paper No. 4), p. 5, hereinafter cited as The Neutrals and the Test Ban Negotiations.

17 Jacobson and Stein, op.cit., p. 358. Since the membership could not be divided into equal thirds the West felt it had avoided creating a precedent in favour of the "troika". Ibid.

18 See Lall, "The Nonaligned in Disarmament Negotiations", p. 18. Mr. Lall mentions India, Sweden and the UAR.

19 Ahmed, The Neutrals and the Test Ban Negotiations, p. 5.

20 See below.

21 Ahmed, The Neutrals and the Test Ban Negotiations, p. 6.

their 1964 joint memorandum on nuclear testing, the Eight referred to themselves as "the eight non-aligned States participating in the Conference".²²

The Conference was not an organ or even a subsidiary organ of the United Nations' General Assembly within the meaning of Article 22 of the UN Charter. The Assembly merely endorsed the United States / Soviet agreement on establishing the ENDC.²³ This had been amply demonstrated in 1969 when the ENDC was enlarged twice upon an agreement reached between the two co-Chairmen of the Conference (United States and Soviet Union representatives), to add 8 additional members who were invited to the Conference table without even prior endorsement by the General Assembly. Representatives of Japan and Mongolia joined the Conference on 3 July 1969. A month later, on 7 August, representatives of Argentina, Hungary, Morocco, the Netherlands, Pakistan and Yugoslavia also joined the Conference. The Conference's name was not changed until 26 August 1969 when the new name was decided to be "The Conference of the Committee

22 DCOR, Suppl. for Jan. to Dec. 1964, Doc. DC/209, Ann. 1, Sec. 0(ENDC/145, 14 Sept. 1964). However, Brazil added a reservation to the joint memorandum which read as follows : "The expression 'non-aligned States' used in this memorandum is understood by the Delegation of Brazil to have the specific sense in relation to Brazil of 'States which do not belong either to NATO or to the Warsaw Pact' and to refer only to the participation of Brazil in the Eighteen-Nation Disarmament Committee." For a commentary on that interpretation, see Ahmed, The Neutrals and the Test Ban Negotiations, pp. 98-101.

23 Article 22 stipulates that "the General Assembly may establish such subsidiary organs as it deems necessary for the performance of its functions." (Emphasis added.) For a discussion of this aspect, see Andrew Martin, Legal Aspects of Disarmament (London : The British Institute of International and Comparative Law, 1963), pp. 30-35. Mr. Martin notes the careful avoidance in the Assembly's resolution of any form of words that would clearly establish an organic relationship between the General Assembly and the Conference (p. 31).

Method of Work

As a consequence of not being a subsidiary organ of the General Assembly, the ENDC had its own peculiar method of work and a sui generis relationship with the United Nations.²⁵

The Conference had two Permanent co-Chairmen, the representatives of the United States and the Soviet Union and rotating Chairmen according to the alphabetical order of the participating countries. As far as the NPT negotiations are concerned, the two co-Chairmen were the two chief negotiators of their respective Governments. They were responsible for negotiating the draft treaties they introduced to the ENDC, either in the form of identical drafts or jointly, among themselves and with other countries whether members of the ENDC or not. The United States chief negotiator was William Foster, the Director of the United States Arms Control and Disarmament Agency (ACDA). The Soviet Union was first represented by Semyon Tsarapkin who became Ambassador to Bonn in 1966 and then by Alexis Roschin, who remained Chairman of the Soviet Union's delegation to the ENDC until after the final formulation of the NPT. Since the presentation of the first identical treaty drafts of 27 August

24 For a useful background of the Conference's enlargement, see Georges Fischer, "Chronique du contrôle des armements", Annuaire Français de Droit International, Vol. XV, 1969, pp. 122-127. As of January 1979, the CCD has been replaced by the Committee on Disarmament (CD).

25 For an excellent treatment of the organizational and procedural aspects, see Lall, Negotiating Disarmament, Chapter II, pp. 9-18. See also Allan Gotlieb, Disarmament and International Law : A Study of the Role of Law in the Disarmament Process (Toronto : The Canadian Institute of International Affairs, 1965), Chapter 10, pp. 63-67. For ENDC documents on the procedure, see DCOR, Suppl. for Jan. 1961 to Dec. 1962, Doc. DC/203, Ann., Sec. A(ENDC/1, 14 Mar. 1962) and Sec. B(ENDC/1/Add. 1, 28 Mar. 1962); and Doc. DC/205, Ann. 1, Sec. A(ENDC/1/Add. 2, 16 July 1962).

1967, the two co-Chairmen acted at the ENDC in complete harmony, taking turns in interpreting drafts' provisions, trying to convince other members of the validity of their drafts and at one point going to the extent of insinuating in a vehement tone the unfavourable implications in the field of peaceful uses of nuclear energy for those who might refuse to become parties to the treaty. In general, the influence of the two co-Chairmen in all phases of the NPT negotiations, whether on substantial or procedural matters pertaining to the conduct of negotiations, was considerably felt.²⁶

All meetings of the Conference were held in private unless otherwise decided. The inaugural meetings of the ENDC's sessions were partly held in public to allow for publicity and coverage by the press. This was especially useful when new treaty drafts were presented such as the introduction of the second identical drafts on 18 January 1968. Formal publicity of the discussions took the form of a very brief communiqué issued at the end of each meeting. As final records of the Conference were not available for some time due to procedural as well as practical considerations, delegations to the ENDC made their speeches at the Conference available to the press on the same day. This practice was widely followed during the NPT negotiations when delegations were keen to make their views, proposals and suggested amendments to the treaty drafts known to the public as widely as possible.²⁷ Informal meetings were held as appropriate, provided the two co-Chairmen agreed. Very few

26 One writer, in his analysis of the evolution of relations between the United States and the Soviet Union, treated the NPT under a phase of those relations that he rightly called "solidarity". J.C. Venezia, Stratégie nucléaire et relations internationales (Paris : Armand Colin, 1971), pp. 44-66.

27 For press arrangements in Geneva, see Loyal N. Gould, The ENDC and the Press (Stockholm : Almqvist and Wiksell, 1969) (SIPRI, Stockholm Papers, No. 3), pp. 9-15.

informal meetings were held during the NPT negotiations. The co-Chairmen were not very much in favour of such meetings.

The direction of work at the beginning of the Conference in 1962 was to devote plenary sessions to reaching an agreement on General and Complete Disarmament (GCD). A Committee of the Whole was constituted to consider "collateral measures". For the first three months or so of the Conference's existence, one meeting a week was held by the sub-committee of the nuclear Powers members of the Conference to reach an agreement on nuclear testing. NPT negotiations at the ENDC were always held in plenary sessions, and sometimes along with other "collateral measures" at the same meeting. A Canadian suggestion in 1966 to devote regular or informal meetings once a week, or at least once every two weeks to the process of constructing an agreed draft on non-proliferation was disregarded by the co-Chairmen.²⁸

There was no provision for taking votes at the Conference. But this did not mean that a consensus was expected on all questions. The report of the two co-Chairmen on 19 March 1968 to the General Assembly incorporating the joint United States / Soviet Union NPT draft of 11 March 1968 was carefully worded so as not to leave the impression that it was a draft emanating from the Conference as a whole.²⁹ This entailed talks, just before the Conference's recess, between the two Co-Chairmen and Ambassador Azim Hussein, the representative of India, on behalf of the Eight.

The United Nations Secretariat served the Conference and the UN Secretary-General was represented at all times by a special representative. The Conference sent its reports and records to the UN Disarmament Commission and the General Assembly.

28 See ENDC/PV.270, 5 July 1966, p. 19.

29 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, p. 1. See in particular paras. 4 and 5 of the report.

Delegations to the Conference

Members of the Conference were represented by especially constituted delegations. Each group of delegations, whether they represented East, West or the Eight, used to hold periodical informal meetings to discuss matters pertaining to the debates taking place at the Conference. With respect to the NPT, as will be later demonstrated in this study, not a single group maintained a harmonious and coherent stand in all phases of the negotiations.

Among the Eastern European delegations, the Romanian had developed a distinct position. It was the only Eastern European delegation to submit proposals and amendments concerning treaty drafts.³⁰ Romania's independent stand on the NPT was but a reflection of its growing independent policy among the Warsaw Pact members. Since 1963, it had been engaged in an uninterrupted attack on Soviet-dominated instruments of political, economic and military control in Eastern Europe.³¹ Romania did not attend the Karlovy Vary Conference of April 1967 which was apparently intended as a display of European communist unity vis-à-vis both China and the United States. The Conference in its declaration expressed support of the NPT as an important step in the direction of achieving a European security system.³² A meeting of the Political Consultative Committee in Sofia in March 1968 was apparently called at the request of Romania to discuss the NPT. It was the only country not to call for the approval of the treaty.³³

30 Ibid., Ann. IV, Sec. 14(ENDC/199, 19 Oct. 1967); Sec. 39 (ENDC/223, 8 Mar. 1968); and Sec. 40(ENDC/223/Rev. 1, 1 Mar. 1968).

31 For a brief summary of the Soviet-Romanian rift, see Andrzej Korbonski, "The Warsaw Pact", International Conciliation, No. 573, May 1969, pp. 49-55.

32 Ibid., p. 53, For the texts of the Communiqué and Statement of the Karlovy Vary Conference, see World Marxist Review, Vol. 10, No. 6, June 1967, pp. 1-4.

33 Korbonski, loc.cit., p. 55.

The NATO delegations were even less coherent than the Warsaw Pact members. Upon the presentation of the very first American draft of a non-proliferation treaty on 17 August 1965 to the ENDC, the United Kingdom was critical of its key articles I and II.³⁴ Later on in the negotiations, the United Kingdom presented its own formal amendments to the first and second identical treaty drafts of 24 August 1967 and 18 January 1968.³⁵ Italy, on its own initiative, submitted to the same session of the ENDC in which the first American draft was presented, a draft of a unilateral non-acquisition declaration.³⁶ Italy also had its own amendments to propose to the first and second identical treaty drafts.³⁷ Canada had always tended in the direction of possible compromise solutions. Typical of Canada's position is the Canadian working paper presented to the ENDC in 1966 giving an article-by-article comparison of the American and Soviet first treaty drafts.³⁸ The objective of the Canadian delegation was, hopefully, to transcribe a language that all could agree upon.³⁹ As one representative noted in 1964, Canada was jokingly referred to at Geneva as the ninth non-aligned member.⁴⁰ France's representatives to the UN Headquarters in

34 ENDC/PV.225, 19 Aug. 1965, p. 10. See below the second phase of the negotiations as well as Part II of this study.

35 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 19(ENDC/203, 22 Nov. 1967) and Sec. 20(ENDC/203/Rev. 1, 22 Feb. 1968).

36 Ibid. Suppl. for Jan. to Dec. 1965, Doc. DC/227, Ann. 1, Sec. D(ENDC/157, 14 Sept. 1965). See below the second phase of the negotiations.

37 Ibid. Suppl. for 1967 and 1968, Docs. 230 and Add. 1, Ann. IV, Sec. 15(ENDC/200/Rev. 1, 26 Oct. 1967) and Sec. 34 (ENDC/218, 20 Feb. 1968).

38 DCOR, Suppl. for 1966, Doc. DC/228, Ann. 1, Sec. M(ENDC/175, 5 July 1966).

39 ENDC/PV. 270, 5 July 1966, p. 19.

40 Lall, Negotiating Disarmament, p. 12. This view was also expressed by a British disarmament negotiator. See Sir Michael Wright, Disarm and Verify. An Explanation of

Geneva were discreetly following the debates at the ENDC through their informal contacts with the members of the Conference. The Federal Republic of Germany, which was very active behind the scenes of the ENDC in Geneva, was called by some observers as the sixth NATO member of the ENDC.⁴¹ In general, the positions taken by NATO members at the ENDC were but a reflection of the difficulties which were involved in negotiating such a treaty even among allies.

By contrast to the other delegations, the eight non-aligned delegations were not parties to an alliance or a pact. Three of them : Brazil, Mexico and Sweden, had not even participated as full members of the two non-aligned Conferences held in Belgrade in September 1961 and in Cairo in October 1964. Brazil had participated in the first Conference as an observer and Mexico had joined it, also as an observer, in the second Conference.⁴² The Eight, however, had made every possible use of the declarations of the two non-aligned conferences, either individually in their statements to the ENDC, or together in their joint memoranda to the ENDC, as well as in their common efforts at the United Nations.⁴³

Since the beginning of the ENDC, the Eight had avoided giving the impression of forming a bloc, or even constituting a

Control Difficulties and of National Policies (London : Chatto and Windus, 1964), p. 132.

- 41 See the two memoranda presented by the FRG to members of the ENDC referred to in note 3 above.
- 42 For Brazil's definition of "non-aligned" in the context of the ENDC, see note 22 above. For an excellent analysis of the Eight's style and method of work, see Ahmed, The Neutrals and the Test Ban Negotiations, Chapter II, pp. 5-14 and Chapter V, pp. 90-101, from which the following is partly drawn.
- 43 For the text of the Belgrade Declaration, see note 10 above. For the text of the Cairo Declaration, see UN Doc. A/5763, 29 Oct. 1964. See in particular part VII of the Declaration pertaining to the question of disarmament and arms control (pp. 21-24).

group within the Conference. This might very well have been the original intention, for they saw their mission as entailing complete detachment and independence, even of a group of non-aligned, or independent States. It was subsequently possible for the Eight to become increasingly tied together by a similarity of circumstances (membership in the forum) and, later, even by solidarity of purpose rather than by any political, doctrinal, or other influences. The closest fitting description of the Eight was that they were a "diplomatic group", to indicate that they would be united on some common diplomatic endeavour. This was an altogether different proposition from the notion of "bloc", "camp", or even "permanent group".⁴⁴

The Eight found themselves united in many instances, as their joint memoranda on nuclear testing clearly demonstrate.⁴⁵ This was equally true of General Assembly resolution 2028(XX) and the Eight's two joint memoranda on non-proliferation, earlier treated in Chapter 2, and that in spite of an attempt in these memoranda to strike a balance between their different approaches.

There were, however, instances in which the Eight failed to act in unison, or did not try or want to agree on a common line of action. Individually they often made important statements of policy without any consultation within the group. Sometimes, important or original suggestions, proposals, or compromise formulas had been "sprung" upon the Conference by one of the Eight simply in order to score a point for its proponent.⁴⁶ The Eight's failure to act in unison was most apparent after the

44 Ahmed, The Neutrals and the Test Ban Negotiations, pp. 7-9.

45 For example, see DCOR, Suppl. for Jan. 1961 to Dec. 1962, Doc. DC/203, Ann. 1, Sec. J(ENDC/28, 16 Apr. 1962).

46 Ahmed, The Neutrals and the Test Ban Negotiations, p. 10.

presentation of the first two American/Soviet identical drafts of 24 August 1967. Their views came to be so varied and even so conflicting that it was no longer possible for them to draft joint memoranda that would even strike a balance between their different attitudes. They obviously ceased to be the conciliators between the United States and the Soviet Union on the non-proliferation issue. The 24 August draft put them for the first time in sharp confrontation with the United States and the Soviet Union. This sort of confrontation seemed to have been a catalyst for deepening the divergences of views among the Eight, which led to their individual independent course in the NPT negotiations which followed. Each of the Eight submitted its own proposals or amendments to the different treaty drafts. But not one of them presented its own NPT draft. The Eight were always waiting for the two Co-Chairmen to take the initiative.⁴⁷

Freedom of action among the Eight, as rightly noted by one writer, was not without benefits. Some ideas that could not have been recommended for joint attention were later supported by them and even improved upon or elaborated further. The Eight derived much of their effectiveness both from their solidarity and from their diversity and versatility.⁴⁸ Their contribution

47 At an early stage, in 1964, the Indian representative at the ENDC had, with the approval of his government, handed copies of a non-dissemination agreement to the United States and the Soviet Union delegations. Many months later, the Indians were told that the two countries were discussing the matter bilaterally, as they both wanted to reach agreement on the issue, but did not wish it to be discussed at the Conference. See Lall, Negotiating Disarmament, p. 66. Sweden, upon the introduction of the 24 August draft in which article III on inspection was left blank, had introduced a few days later its own draft of article III. See DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 11(ENDC/195, 30 Aug. 1967).

48 Ahmed, The Neutrals and the Test Ban Negotiations, pp. 10-11. Professor Georges Fischer missed that point on the advantages of the Eight's freedom of action when he expressed his regrets that the UAR and Nigeria among others had proposed amendments without consulting the others. Georges

to the drafting of the NPT was felt, as some of their individual proposals were accepted and incorporated in the final treaty draft sent to the General Assembly's twenty-second resumed session in 1968. Even those proposals and amendments which were not accepted or taken into consideration by the two co-Chairmen in drafting that final draft, had contributed in many instances in generating useful original interpretations of the Treaty provisions by the two co-authors. The role played by the Eight was considerably different than the role they had played in negotiating the Test-Ban Treaty. It was finally negotiated in Moscow only between the United States, the United Kingdom and the Soviet Union. The non-nuclear-weapon States could not have been disregarded as far as the NPT was concerned. They were the countries aimed at by the Treaty and their interests and security were at stake.

The ENDC received continuous support from the UN General Assembly in its endeavours to reach an agreement on non-proliferation. However, many UN members were very interested in participating in such important negotiations. The following statement made by the representative of Pakistan to the First Committee of the General Assembly in 1965 illustrated that concern. He said :

"Only eighteen countries were able to take part in the work of the Eighteen-Nation Committee; yet many other States were vitally interested in the problem of disarmament - in some cases more interested than the members of the Committee. Since the emergence of political grouping on which the

Fischer, La Non-Prolifération des armes nucléaires (Paris : Librairie Générale de Droit et de Jurisprudence, 1969), p. 52, note 48. In 1967, the Eight had reached a stage at which joint endeavours were not possible due to their sometimes sharply divergent views.

membership of the ... Committee was based there had been changes in the World ..."⁴⁹

That concern led to the enlargement of the ENDC only a few years later, in 1969, as mentioned above. It also led Pakistan to formally propose at the twenty-first session of the General Assembly the convening of a conference of non-nuclear-weapon States not later than July 1967.⁵⁰ However, before dealing with that proposal, which is included in the analysis of the second phase of the NPT negotiations, attention is now devoted to the first phase of those negotiations. The analysis of the two phases is essentially concerned with drawing an outline of the course of negotiations without going very much into the substance of treaty drafts or proposals which are the subject matter of the following parts of this study.

II. First Phase of the Negotiations : 14 March 1962 - 16 June 1965

Non-Proliferation in GCD Schemes and as a "Collateral Measure", 1962

At the outset of the ENDC's existence, the Soviet Union, on 15 March 1962, submitted a "Draft Treaty on General and Complete Disarmament" which provided among the first-stage measures an article on the "(p)revention of the further spread of nuclear weapons" (Article 16). The article reads as follows :

"The States parties to the treaty which possess nuclear weapons undertake to refrain from transferring control over nuclear weapons and from transmitting information necessary for their production to States not possessing such weapons. The States parties to the Treaty not possessing nuclear weapons undertake to refrain from producing or otherwise obtaining nuclear weapons and shall refuse to

49 GAOB, 20th Sess., 1st Cttee, 1372nd mtg, 5 Nov. 1965, para. 10.

50 Ibid., 21st Sess., Anns., a.i. 26, Doc. A/6509, para. 5.

admit the nuclear weapons of any other States into their territories."⁵¹

A month later, on 18 April 1962, the United States also submitted to the ENDC an "Outline of Basic Provisions of a Treaty on General and Complete Disarmament in a Peaceful World" which provided also among the first stage measures a paragraph on "(n)on-transfer of nuclear weapons" which reads as follows :

"The Parties to the Treaty would agree to seek to prevent the creation of further national nuclear forces. To this end, the Parties would agree that :

(a) Any Party to the Treaty which had manufactured, or which at any time manufactures, a nuclear weapon would :

(i) Not transfer control over any nuclear weapons to a State which had not manufactured a nuclear weapon before an agreed date;

(ii) Not assist any such State in manufacturing any nuclear weapons.

(b) Any Party to the Treaty which had not manufactured a nuclear weapon before the agreed date would :

(i) Not acquire, or attempt to acquire, control over any nuclear weapons;

(ii) Not manufacture, or attempt to manufacture, any nuclear weapons."⁵²

But besides the question of GCD discussed in the plenary sessions of the ENDC, members of the latter had put forward several questions for discussion in the Committee of the Whole entrusted with the consideration of "collateral measures". On 25 May 1962, upon the recommendations of the two co-Chairmen, the Committee of the Whole agreed that the next priority on its agenda should be the concurrent consideration of proposals on "(m)asures to prevent further dissemination of nuclear weapons" and "(r)eduction of the possibility of war by accident,

51 DCOR, Suppl. for Jan. 1961 to Dec. 1962, Doc. DC/203, Ann. 1, Sec. C(ENDC/2, 15 March 1962), p. 122.

52 Ibid., Doc. DC/203, Ann. 1, Sec. F(ENDC/30, 18 Apr. 1962), p. 145.

miscalculation, or failure of communications".⁵³ The co-Chairmen recommended that one of the two topics be presented by one of the co-Chairmen, and the other presented by the other co-Chairman.⁵⁴ It was not until a meeting held on 19 July 1962 by the Committee of the Whole, the last one to be held by the Committee, that the two above-mentioned items were presented; non-dissemination by the Soviet Union and the reduction of the possibility of war by the United States.⁵⁵ The latter question was pursued vigorously in 1963 by the two countries and led to the signature on 20 June 1963 in Geneva of a "Memorandum of Understanding Regarding the Establishment of a Direct Communications Link" which is widely known and referred to as the "hot-line" agreement.⁵⁶ The system became operational in October 1963.⁵⁷ Although the agreement is not strictly speaking an arms control measure, the system's subsequent employment demonstrated its usefulness in time of crisis. The "hot-line" was one of the consequences of the 1962 Cuban missile crisis.⁵⁸

As to the question of non-dissemination presented by the Soviet Union to the Committee of the Whole, the statement made

53 For the list of questions suggested, see ENDC/C.1/2, 2 Apr. 1962.

54 ENDC/C.1/19, 25 May 1962. The first item which was discussed in the Committee was "(c)essation of war propaganda".

55 ENDC/C.1/PV.9, 19 July 1962, p. 5.

56 For the text of the "Memorandum" and its Annex, see The United Nations and Disarmament : 1945-1970, Appendix V, pp. 447-449.

57 The system amounts to a teletype link passing through London, Stockholm and Helsinki, with instant coding and decoding by American and Soviet equipment in each capital. On 30 September 1971 a further agreement was signed in Washington, D.C., by the United States and the Soviet Union to establish a faster "hot-line" operating via satellites orbiting above the earth in place of the previous system. For the text of the new agreement and its annex, see DOSB, Vol. LXV, No. 1686, 18 Oct. 1971, pp. 401-403.

58 See Roberts, op.cit., pp. 66-67.

by its representative, Ambassador Zorin, was dominated by accusations directed against the Federal Republic of Germany on the ground that it was driving towards access to nuclear weapons, especially through NATO plans for establishing an integrated European nuclear force. Ambassador Zorin proposed an agreement among the Nuclear Powers not to deliver nuclear weapons, control over them or information necessary for their manufacture to States which did not possess them.⁵⁹

The United States representative, Ambassador Dean, repelled the Soviet accusations and referred, among others, to the FRG undertaking in 1954 not to manufacture in its territory any atomic weapons. He also explained that nuclear weapons located on German territory among the NATO forces were entirely under United States and British control.⁶⁰ President Kennedy said, in a message to the ENDC on 14 July 1962, that the United States would continue to seek an agreement on non-proliferation.⁶¹

As this was the last meeting of the Committee of the Whole, the question was not pursued at Geneva at that time, because of a decision to hold informal American-Soviet bilateral talks elsewhere.⁶²

59 ENDC/C.1/PV.9, 19 July 1962, pp. 11-17, especially pp. 12-13 and 17.

60 Ibid., pp. 20-22. For the FRG undertaking, see note 46 in Chapter 1.

61 ENDC/144, 16 July 1962.

62 US ACDA, International Negotiations on the Treaty on the Nonproliferation of Nuclear Weapons (Pub. No. 48, Jan. 1969) (Washington, D.C. : US Government Printing Office, 1969), p. 6, hereinafter cited as International Negotiations. On 25 August 1962, the Soviet Government notified China that United States Secretary of State Rusk had proposed to discuss an agreement and that the Soviet Government gave an affirmative reply to Mr. Rusk's proposal. See "Statement by the Spokesman of the Chinese Government. A Comment on the Soviet Government's Statement of August 3", dated 15 August, 1963, Peking Review, Vol. VI, No. 3, 16 Aug. 1963, p. 15.

The Test-Ban Treaty, 1963

As noted in Chapter 2, there was no specific resolution on non-proliferation by the General Assembly in 1962 and 1963. In 1963, discussions continued on non-proliferation at the ENDC but at that time in the plenary meetings. The positions of the two co-Chairmen remained precisely as they had been in 1962 on NATO nuclear-defence arrangements. However, 1963 witnessed intensive negotiations leading to the successful conclusion of the Test-Ban Treaty. It was signed on 5 August 1963 in Moscow and entered into force on 10 October 1963.⁶³ But as the Test-Ban Treaty is an arms control measure closely linked with the NPT, especially as a limited non-proliferation measure, the study and the analysis of its provisions is an integral part of the study and analysis of NPT provisions, which is undertaken in the following parts of this study. Some provisions of the NPT were even tailored on some provisions of the Test-Ban Treaty.⁶⁴

Mr. Averell Harriman, the head of the United States delegation, sent to Moscow to negotiate the conclusion of the Test-Ban Treaty, had apparently suggested to Mr. Khrushchev the idea of a non-proliferation treaty forbidding the transfer of

63 For the text of the Treaty, see DCOR, Suppl. for Jan. to Dec. 1963, Doc. DC/208, Ann. 1, Sec. E(ENDC/100/Rev. 1, 30 July 1963). The treaty was circulated to the ENDC before its signature but after it had been initialed on 25 July 1963.

64 The long history of the Test-Ban Treaty Negotiations is beyond the scope of this study. However, it will be sometimes touched upon in the course of the analysis of some of its provisions. The following works are suggested for the history of the negotiations : Ahmed, The Neutrals and the Test Ban Negotiations; Arthur Hobson Dean, Test Ban and Disarmament. The Path of Negotiations (New York : Harper and Row, 1966); Marie-Françoise Furet, Experimentation des armes nucléaires et droit international public (Paris : A. Pedon, 1966); and Jacobson and Stein, op.cit. Mr. Ahmed as well as Mr. Dean were involved at some point in the test-ban negotiations.

nuclear weapons from one country to another. The latter drew back from this, arguing that as other nations signed the Test-Ban Treaty, it would have an anti-proliferation effect; but a non-transfer treaty should be deferred for future consideration.⁶⁵

The ENDC, 1964

In 1964, non-proliferation figured in both President Johnson's message to the ENDC on 21 January 1964,⁶⁶ and the Soviet Government's memorandum dated 28 January 1964.⁶⁷ Both the United States and the Soviet Union, whether in the aforementioned texts or in statements made at the ENDC, favoured an agreement on non-proliferation on the basis of the "Irish Resolution". However, their basic difference remained the nuclear-defense arrangements in NATO and more precisely the multilateral nuclear force (MLF). The Soviet memorandum made it clear that "transfer of nuclear weapons or access to them shall not take place directly, through military blocs, for example, through the so-called multi-lateral nuclear force of NATO."⁶⁸

Since the presentation of the American message and the Soviet memorandum to the ENDC in January 1964, definite agreement at the ENDC for putting non-proliferation on the active agenda of items was not reached till 18 June 1964. The MLF was also at the centre of the exchange of views that took place in the meetings of the Conference between the United States and the Soviet Union representatives, the former trying to prove that the MLF would not lead to proliferation.⁶⁹ Views on the

65 Arthur M. Schlesinger Jr., A Thousand Days. John F. Kennedy in the White House (London : André Deutsch, 1965), p. 774.

66 DCOR, Suppl. for Jan. to Dec. 1964, Doc. DC/209, Ann. 1, Sec. B(ENDC/120, 21 Jan. 1964).

67 Ibid., Sec. E(ENDC/123, 28 Jan. 1964).

68 Ibid., para. 20.

69 ENDC/PV. 195, 2 July 1964, pp. 37-38. See also the notes exchanged between the Soviet Union and the United States on the MLF. ENDC/137, 15 July 1964 and ENDC/142, 10 Sept. 1964.

MLE were also expressed by some non-aligned members of the ENDC who feared that the question would jeopardize efforts to reach an agreement on non-proliferation.⁷⁰

The 19th session of the UN General Assembly in 1964 was paralysed, as noted in Chapter 2, because of the question of financing peace-keeping operations and the possible invocation of article 19 of the UN Charter.

China's Ascendancy to Nuclear Status, 1964

On 16 October 1964, the People's Republic of China exploded its first nuclear device in the atmosphere, thus becoming the fifth Power to have exploded such devices. China's ascendancy to nuclear status brought the non-proliferation question to public attention.⁷¹ In the United States two events took place that had a direct bearing on subsequent negotiations on a NPT. The first was President Johnson's announcement in a radio-television address on 18 October 1964, that :

"The nations that do not seek national nuclear weapons can be sure that, if they need strong support against some threat⁷² of nuclear blackmail, then they will have it."

This statement brought to the fore the question of nuclear guarantees to non-nuclear-weapon States that led four years later to the adoption of Security Council Resolution 255.⁷³

The second event was the creation in November 1964 of a Presidential Panel headed by Roswell Gilpatric, the former Under-Secretary of Defense, to draft a comprehensive policy on how to prevent the proliferation of nuclear weapons. The

70 See later note 149 in Chapter 4.

71 For a brief account of the 16 October detonation, see Keesing's Contemporary Archives, Vol. XIV, 1963-64, p. 20372 A.

72 Documents on Disarmament, 1964, p. 468.

73 See second phase below.

Panel's report submitted to the President on 21 January 1965, which was shrouded in the strictest secrecy, had leaked to the press in June-July 1965. It was reported that the report had given priority to a non-proliferation treaty over the establishment of a NATO multilateral nuclear force.⁷⁴ This had meant, at the time, paving the way to an agreement with the Soviet Union, which had relentlessly attacked the MLF project.

The Disarmament Commission, 1965

In spite of the rising attention given to the problem of nuclear weapons' proliferation as a result of China's emergence as a nuclear Power, the ENDC was not convoked by the two Co-Chairmen at the beginning of 1965. The failure to agree to summon the Conference was attributed to a variety of reasons. In the first place, the atmosphere of crisis that prevailed during the 19th session of the UN General Assembly, paralysed by the possible invocation of article 19 against the Soviet Union, had not yet faded. The American involvement in the Vietnamese war was being intensified. There was also a new leadership in the Soviet Union after Mr. Krushchev's disappearance from the political scene in October 1964. Moreover, the MLF question was still hindering any possible agreement between the Soviet Union and the United States.

On the other hand, as no disarmament matters were really discussed during the 19th session of the Assembly, the majority of the members of the ENDC felt that it could not usefully discuss the items on its agenda - including non-proliferation, until all members of the United Nations had had an opportunity to give their views upon them.⁷⁵ The deadlock came to an end

⁷⁴ The New York Times, 24 and 25 June 1966, and 1 July 1966; and New York Herald Tribune, 3-4 July 1965.

⁷⁵ E.L.M. Burns, "The Nonproliferation Treaty : Its Negotiation and Prospects", International Organization, Vol. XXIII, No. 4, Autumn 1969, p. 790, hereinafter cited as "The Nonproliferation Treaty".

when the Soviet Union on 31 March 1965 requested a meeting of the UN Disarmament Commission whose membership included all members of the United Nations.⁷⁶ The Commission met from 21 April to 16 June 1965. This was its last meeting before its reestablishment by the Tenth Special Session of the UN General Assembly devoted to disarmament in 1978.

At the Disarmament Commission meetings, as one negotiator noticed, the problems which had taken almost exactly three years to solve were apparent in the statements made at those meetings.⁷⁷ The major problem was still the controversial issue of the MLF,⁷⁸ which was then extended to the British proposal for an Atlantic Nuclear force (ANF).⁷⁹ Several questions relating to a non-proliferation treaty were raised by the non-nuclear-weapon States and especially by the non-aligned members of the ENDC, such as nuclear guarantees, peaceful uses of atomic energy, tangible steps leading to disarmament including a comprehensive test ban, freeze on the production of nuclear weapons and the cutoff of fissionable material for military purposes. India suggested an integrated solution of nuclear weapons' proliferation comprising five elements, and Sweden advocated a package linking a non-proliferation agreement with a comprehensive test ban and fissionable materials production cutoff.⁸⁰

76 DCOR, Suppl. for Jan. to Dec. 1965, Doc. DC/210, 31 Mar. 1965. General Burns, the Canadian representative at the ENDC had suggested, during the Assembly's session, to Ambassador Tsarapkin, the Soviet representative at the ENDC, to convoke the Disarmament Commission. The latter said at the time that he did not think that that would be possible. E.L.M. Burns, "The Nonproliferation Treaty", p. 790.

77 Ibid.

78 See DCOR, 72nd mtg, 26 Apr. 1964 (USSR) and 73rd mtg, 26 Apr. 1964 (USA).

79 See Lord Chalfont's statement, Ibid., 74th mtg, 28 Apr. 1964, paras. 28-34 and Soviet Ambassador Federenko's response, 87th mtg, 24 May 1965, paras. 60-61.

80 See note 63 in Chapter 2.

On 15 June 1965, the Commission adopted a resolution sponsored by 31 countries. It recommended the ENDC to "accord special priority to the consideration of the question of a treaty or a convention to prevent the proliferation of nuclear weapons, giving close attention to the various suggestions that agreement could be facilitated by adopting a programme of certain related measures."⁸¹ (Emphasis added.) The resolution was adopted by 83 votes in favour, 1 against (Albania) and 18 abstentions including the Soviet Union and the Eastern European countries.⁸² The Soviet Union abstained on the resolution for two main reasons. The first was that the wording of the passage relating to non-proliferation failed to ensure the necessary solution of the problem. "This wording ... invites us to shut our eyes to the granting of access to nuclear weapons to the West German militarists and revanchists within the framework of NATO."⁸³ The second reason was that the same wording made the solution of nuclear proliferation dependent upon the solution of a whole series of other complex problems.⁸⁴

With the adoption of that resolution the road was paved towards a new round of negotiations at the ENDC which met a few weeks later, on 27 July 1965, marking the beginning of a

81 DCOR, Suppl. for Jan. to Dec. 1965, Doc. DC/225, 15 June 1965. The resolution also dealt with other questions such as nuclear testing. The Disarmament Commission also adopted a second resolution welcoming the proposal adopted at the second non-aligned conference in 1964 for the convening of a world disarmament conference and recommending the General Assembly to give urgent consideration to the proposal at its 20th session. See Ibid., Doc. DC/224, 11 June 1965. For a brief summary of the proposal, see The United Nations and Disarmament : 1945-1970, pp. 103-107.

82 For the details of the voting, see DCOR, 102nd mtg, 15 June 1965, para. 21.

83 Ibid., 99th mtg, 14 June 1965, para. 80.

84 Ibid., para. 83.

new and active phase of negotiations towards the conclusion of the NPT.⁸⁵

III. The Second Phase of the Negotiations : 27 July 1965 - 5 March 1970

The ENDC in 1965 and the American Draft Treaty of 17 August 1965

The time that had elapsed between the winding-up of the 1965 session of the Disarmament Commission and the reconvening of the ENDC on 27 July 1965 had not been wasted. A draft treaty on non-proliferation was already being worked out before and during the Disarmament Commission's session. As an official British publication notes, the draft treaty submitted to the ENDC in the Summer of 1965 "owed much to British thinking and was formally tabled by the United States after a series of discussions in NATO."⁸⁶ As a matter of fact the British and

85 It was reported that most delegations in Geneva believed that the Soviet Union's main reason for resuming the talks at Geneva was the Disarmament Commission's 83 votes in favour of it, an expression of non-aligned opinion the Soviet Union could scarcely ignore. Another reason mentioned was that China's political reverse in Algiers (where an Afro-Asian Conference failed to take place on 26 June 1965) encouraged the Soviet Union to feel that there was little risk in putting more emphasis on peaceful co-existence policy, Vietnam notwithstanding. There was also some evidence that the Soviet Union was impressed by William Foster's article in the July issue of Foreign Affairs which seemed to have been interpreted by the Soviets as indicating that the United States was ready to envisage the weakening of existing alliances as part of the price to be paid for a non-proliferation agreement. See The Sunday Times, 1 Aug. 1965. For the article referred to, see William C. Foster, "New Directions in Arms Control and Disarmament", Foreign Affairs, Vol. 43, No. 4, July 1965, pp. 587-601.

86 Disarmament : The Path to Peace (London : Her Majesty's Stationary Office, 1968), p. 4, para. 22.

the Canadians had been working since early 1965 on treaty drafts and they began comparing their respective texts while the Disarmament Commission was still in progress. It was decided not to attempt to amalgamate them until the views of NATO nations not represented in the ENDC had been obtained. The draft treaties were circulated to the NATO Council in July 1965.⁸⁷ However, it seemed that the British had originally intended to table their draft in the ENDC in Geneva even if it failed to gain the full support of all NATO members.⁸⁸

The British draft presented to the NATO Council meeting in Paris on 26 July 1965 raised a major difference of views between the British and the Americans. It forbade Nuclear Powers to hand over control of nuclear weapons even to any association of States unless subject to veto by the United Kingdom and the United States. The latter differed from the British in wanting to keep the way open for the possible evolution of the MLF into a partnership between the United States and a collective European nuclear force in which the veto might give way to some form of majority decision.⁸⁹ Disagreement also existed over Britain's insistence that a draft treaty should be a starkly simple document in itself, uncluttered with inspection clauses. Against this position were the United States as well as the FRG, Italy and Canada.⁹⁰ The latter's draft was more complicated, introducing issues which were liable to give rise to protracted negotiations as they included the fundamental principle of inspection, a provision on collective security guarantees, minimum adherence to the treaty and sanctions.⁹¹

87 E.L.M. Burns, Megamurder (London : George G. Harrap, 1966), p. 265.

88 See the remarks made by Lord Chalfont to the press representatives. The Times, 23 July 1965.

89 The Observer, 25 July 1965.

90 The Sunday Times, 1 Aug. 1965.

91 The Times, 1 Aug. 1965.

Therefore, there was no agreement on a joint text and the British representative refrained from going alone and presenting his draft to the ENDC.⁹²

After the convening of the ENDC on 27 July 1965, it took almost three weeks of extended negotiations in Geneva among the four NATO members of the Conference to reach a compromise. It was agreed that the United States would put forward a joint draft treaty, which was mainly British and also to some extent Canadian, with the United Kingdom, Italy and Canada reserving their positions on specific aspects.⁹³ Thus, the first American draft treaty was presented to the ENDC on 17 August 1965, reflecting the prevailing American position on the MLF which was also backed by the Federal Republic of Germany.⁹⁴ The representative of the United Kingdom had discreetly expressed his Government's views on this latter question at the ENDC by stating that articles I and II of the American draft did not rule out the possibility that an association of States might be set up with the capacity to make use of nuclear weapons by the decision of a majority of its members without the veto of an existing nuclear Power.⁹⁵ The Italians presented the draft of a unilateral non-acquisition declaration which amounted to a moratorium agreed to by the non-nuclear States renouncing the acquisition of nuclear weapons for a specific period of time, after which they would be free to act if the nuclear Powers had not yet agreed among themselves on a non-proliferation treaty.⁹⁶

92 The New York Times, 27 July 1965.

93 The Observer, 15 Aug. 1965.

94 DCOR, Suppl. for Jan. to Dec. 1965, Doc. DC/227, Ann. 1, Sec. A(ENDC/152, 17 Aug. 1965).

95 ENDC/PV.225, 19 Aug. 1965, p. 10. See also the declarations made by Lord Chalfont at a press conference following the tabling of the United States' draft. The Times, 18 Aug. 1965.

96 DCOR, Suppl. for Jan. to Dec. 1965, Doc. DC/227, Ann. 1, Sec. D(ENDC/157, 14 Sept. 1965). See also Francesco

For the first time the Conference dealt with a definite text which included a preamble and seven articles. (See Appendix 3-A.) The first two articles contained the main obligations, the third contained a loose obligation on inspection, the fourth defined the term "nuclear State", and the remaining articles contained the final clauses including a withdrawal clause.

The major problem between the United States and the Soviet Union in the Conference was still the nuclear defense arrangements within NATO. The problem was even aggravated for the first time by an explicit text which did not preclude a multilateral nuclear force with the capacity of using nuclear weapons some time in the future by a majority decision of its members.

The Vietnam war was also a problem which was raised by the Soviet and Eastern European representatives in their statements to the Conference. In their view the American involvement and the escalation of the war would perturb negotiations in Geneva.⁹⁷

The UN General Assembly in 1965 and the First Soviet Draft of 24 September 1965

At the UN General Assembly's 20th session, the Soviet Union submitted its first NPT draft which was attached to its request

Cavaletti, "An Italian Proposal of Nuclear Moratorium" in James E. Dougherty and J.F. Lehman, Jr. (Eds.), Arms Control for the Late Sixties (Princeton, New Jersey : D. Van Nostrand, 1967), pp. 157-161.

97 For example, see ENDC/PV.220, 3 Aug. 1965 (USSR), especially pp. 13-14. See also the editorial of International Affairs (Moscow), No. 10, Oct. 1965. It said that "(t)he best way to pave the road to progress in Geneva is to stop the U.S. aggression in Viet-Nam ... Peace in Vietnam would be a guarantee of success in Geneva." (p. 6).

of 24 September 1965 to include "non-proliferation of nuclear weapons" in its agenda.⁹⁸ The Soviet draft consisted of a preamble and seven articles. (See Appendix 3-B.) The first three articles, which contained the main obligations, foreclosed any possibility for the creation of a multilateral force or an equivalent association within NATO. Contrary to the American draft, the Soviet draft contained no provision on inspection. The remaining articles contained the final clauses including a withdrawal clause.

The First Committee of the Assembly had the two drafts to compare, but still no progress could be achieved as both the Soviets and the Americans held their positions on nuclear sharing within alliances.

The Italian draft on the non-acquisition declaration received some attention by some members of the First Committee. Views expressed on the draft were evenly divided between supporters and opposers. The former saw in it a valuable contribution towards an early NPT,⁹⁹ a positive step on the long road towards a general treaty on disarmament,¹⁰⁰ and a measure that could serve to contain the danger until a binding treaty could be agreed upon.¹⁰¹ Others qualified their support for the proposal by requesting that the moratorium should be fixed for a certain limited duration such as two years, or that the moratorium should be matched by another moratorium on underground

98 GAOR, 20th Sess., Anns. (Vol. III), a.i. 106, Doc. A/5976, 24 Sept. 1965. The text of the Soviet draft was also later circulated as a document of the ENDC. See ENDC/164, 27 Jan. 1966.

99 GAOR, 20th Sess., 1st Cttee, 1359th mtg, 22 Oct. 1964, para. 10 (Liberia); 1360th mtg, 22 Oct. 1965, para. 14 (Chili); and 1363rd mtg, 20 Oct. 1965, para. 21 (Iran).

100 Ibid., 1350th mtg, 6 Oct. 1965, para. 54 (Venezuela).

101 Ibid., 1366th mtg, 27 Oct. 1965, para. 3 (Somalia).

nuclear tests by the nuclear Powers.¹⁰² Those opposed to the proposal doubted its value and effectiveness as long as the nuclear Powers were not committed to it.¹⁰³ The moratorium was also criticised for not laying down contractual obligations.¹⁰⁴ The Italian proposal was not, however, seriously discussed later in the negotiations. The drive had been persistent for a definite treaty text.¹⁰⁵

The General Assembly adopted at the end of the debate its resolution 2028(XX) on the five principles dealt with in Chapter 2. The ENDC was requested, by virtue of the same resolution, to submit to the Assembly at an early date a report on the results of its work on the NPT.

The ENDC in 1966 and the American amendments of 21 March 1966

The ENDC reconvened on 27 January 1966. It held two sessions in 1966, the first from 27 January to 10 May and the second from 14 June to 25 August. During the two sessions, no progress had been achieved on a draft treaty text because of the continuing controversy over nuclear-sharing arrangements in NATO. On 21 March the United States introduced a set of amendments to the ENDC which had the objective of allaying Soviet fears of the possibility that a NATO multilateral nuclear force could use nuclear weapons without the agreement of the United

102 Ibid., 1365th mtg, 27 Oct. 1965, para. 14 (Sweden) and 1367th mtg, 28 Oct. 1965, para. 28 (Zambia).

103 Ibid., 1356th mtg, 19 Oct. 1965, para. 24 (Lybia); 1361st mtg, 22 Oct. 1965, para. 7 (Peru); 1366th mtg, 27 Oct. 1965, para. 15 (Ghana); and 1367th mtg, 28 Oct. 1965, para. 17 (Uganda).

104 Ibid., 1365th mtg, 27 Oct. 1965, para. 7 (Hungary). See also 1360th mtg, 22 Oct. 1965, para. 24 (Czechoslovakia).

105 For a further discussion of the weaknesses of the Italian proposal, see G. Fischer, La non-prolifération des armes nucléaires, pp. 54-55.

States.¹⁰⁶ (See Appendix 3-C.) The amendments, however, had not changed the position of the Soviet Union which continued to attack any form of nuclear sharing within NATO allowing the Federal Republic of Germany an access to nuclear weapons.

However, the discussions at the ENDC in 1966 were not without value. Many new ideas and proposals were put forward. The eight non-aligned members tried to crystallize and demonstrate the importance of the five principles of General Assembly resolution 2028(XX). Their second joint memorandum on non-proliferation, referred to in Chapter 2, threw more light on the meaning and the value of the five principles.

The Pastore Resolution, 17 May 1966

While discussions in 1966 were taking place at the ENDC, an important development was taking place in the United States that had a direct bearing on future NPT negotiations. The Joint Committee on Atomic Energy held hearings on February 23 and March 1 and 7 to discuss a Senate draft resolution submitted by Senator Pastore, the Vice-Chairman of the Committee, to the Senate on 18 January 1966 and, referred to the Committee for its consideration. The operative part of the resolution read as follows :

"Resolved that the Senate commends the President's serious and urgent efforts to negotiate international agreements limiting the spread of nuclear weapons and supports the principle of additional efforts by the President which are appropriate and necessary in the interest of peace and for the solution of nuclear proliferation problems."¹⁰⁷

106 For the set of amendments, see DCOR, Suppl. for 1966, Doc. DC/228, Ann. 1, Sec. K(ENDC/152/Add. 1, 21 Mar. 1966).

107 US Congress, Joint Committee on Atomic Energy, Hearings : Nonproliferation of Nuclear Weapons, 89th Congress, 2nd. Session on S. Res. 179, 1966 (Washington, D.C. : US Government Printing Office, 1966), Appendix 13, p. 179, hereinafter cited as Hearings on Non-Proliferation, 1966. For Senator Pastore statement in the Senate, see Ibid., Appendix 12, pp. 142-151.

Senator Pastore, who was not satisfied with the non-committal phrasing of article III of the first American draft treaty on inspection, had also strongly recommended a new language for article III which later served as a basis for the formulation of the final text of the Article.¹⁰⁸ On 17 May 1966, the Senate approved the "Pastore Resolution" without a dissenting vote.¹⁰⁹

The "Pastore Resolution" is a very good example of how public opinion in a country can give a boost to its Government's efforts in a field pertaining to peace and security. The discussions that took place in the Senate and the Joint Committee had helped in elucidating many aspects related to the NPT negotiations.¹¹⁰ The debate had also shown that the Senate would not allow United States' nuclear weapons to be transferred to any proposed MLF. This had also helped the American Administration in orientating its policy on this question.¹¹¹

Bilateral Diplomacy, 1966

The impasse in the negotiations existing during the 1966 session of the ENDC was broken, following the adjournment of

108 Ibid., Appendix 12, pp. 147-148.

109 International Negotiations, p. 31.

110 The NPT was also extensively discussed in several committees of the American Congress as well as in the Senate itself. It was especially discussed in the Senate Committee on Foreign Relations in 1968 and 1969. They had all contributed to a deeper understanding of the treaty's objectives and provisions.

111 By that time the American Administration had opted for consultations on nuclear strategy, by proposing the establishment of a "Special Committee" within NATO (see Chapter 4). However, all American officials questioned on the MLF in the Joint Committee had seemed to avoid leaving the impression that the MLF was shelved. They usually said that the MLF was just a project among others under consideration for better defence arrangements within the Alliance.

the Conference in August 1966, when the ENDC's co-Chairmen began a series of bilateral talks.¹¹²

The UN General Assembly had also started its 21st session during which two important meetings took place in Washington. The first was in September 1966 between President Johnson and Dr. Ludwig Erhard, the Chancellor of the FRG. The latter seemed to have been either convinced or told by the President of the United States, that the MLF was not a very good idea in itself and, moreover, that it was an apparently insuperable obstacle to a non-proliferation treaty that was as important to Germany as to anyone else.¹¹³ The second meeting was in October between President Johnson and Mr. Gromyko, the Soviet Foreign Minister. That meeting seemed to have been a turning point towards the conclusion of the NPT. In their talks, on the 10th of October, the President and Secretary Rusk gave Mr. Gromyko a strong indication that the previous United States' reservations aimed at according some nuclear-sharing device in NATO had been withdrawn.¹¹⁴

112 US Congress, House of Representatives, Committee on Foreign Affairs, Hearings : Arms Control and Disarmament Act Amendments, 90th Congress, 2nd Session on H.R. 14940, 1968 (Washington, D.C. : US Government Printing Office, 1968), p. 29, hereinafter cited as Hearings on Arms Control, 1968.

113 Sherman, Nuclear Proliferation, pp. 44-45. For the communiqué dated 27 Sept. 1966, see Keessing's Contemporary Archives, Vol. XV, 1965-1966, p. 21784 A.

114 The New York Times, 25 Aug. 1967. The paper's report was quoted in the House Committee on Foreign Affairs without being contradicted by any official of the American Administration attending the Committee's hearings. See Hearings on Arms Control, 1968, p. 108. See also The Observer, 23 Oct. 1966, which reported that Mr. Gromyko raised no strong objections to the idea of establishing the "Special Committee" as a substitute for the MLF (see note 111 above).

Following the Washington meetings, the ENDC's co-Chairmen renewed bilateral discussions in New York during the Assembly's session. These resulted in a wide measure of US-Soviet agreement on central articles of a non-proliferation treaty.¹¹⁵ By mid-December 1966, the United States was able to submit to the NATO allies new draft formulations of the main parts of the treaty that the United States thought it might be able to negotiate with the Soviets while still maintaining US and NATO security objectives. This stage of consultations with allies continued through January and early February, prior to the re-opening of the ENDC on 21 February 1967.¹¹⁶

The UN General Assembly, 1966

On the wider scale of multilateral diplomacy, the UN General Assembly in 1966 adopted, after a laborious session on questions of disarmament and arms control, a whole set of resolutions most of which were either on non-proliferation or closely related to it. Four of those resolutions should be mentioned here in the context of the general outline.

The first two resolutions were adopted under the item "Non-Proliferation of Nuclear Weapons : Report of the Conference of the Eighteen-Nation Committee on Disarmament".¹¹⁷

The first of the two resolutions reaffirmed General Assembly resolution 2028(XX) and called upon all States to adhere strictly to the principles laid down in that resolution for the negotiation of the treaty, and called upon the ENDC as well to give high priority to non-proliferation in accordance with the mandate contained in the same resolution. Operative paragraphs 3 and 4 of the resolution related to the non-use of

¹¹⁵ Disarmament : The Path to Peace, p. 5.

¹¹⁶ Hearings on Arms Control, 1968, p. 29.

¹¹⁷ GAOR, 21st Sess., Anns. (Vol. II), a.i. 26, Doc. A/6509, 14 Nov. 1966.

nuclear weapons against States located in denuclearized zones and in general against States without nuclear weapons on their territories.¹¹⁸

The second resolution, which was originally a Pakistani idea,¹¹⁹ decided to convene a conference of non-nuclear-weapon States to meet not later than July 1968¹²⁰ to consider the following and other related questions :

"(a) How can the security of the non-nuclear States best be assured ?

(b) How may non-nuclear Powers co-operate among themselves in preventing the proliferation of nuclear weapons ?

(c) How can nuclear devices be used for exclusively peaceful purposes ?"

The President of the General Assembly was immediately requested to set up a preparatory committee, widely representative of the non-nuclear-weapon States, to make appropriate arrangements for convening the conference and to consider the question of association of nuclear States with the work of the conference and report thereon to the General Assembly at its 22nd session.¹²¹

On 20 December 1966, the President of the Assembly designated the members of the "Preparatory Committee". They were Chile, Dahomey, Kenya, Kuwait, Malaysia, Malta, Nigeria,

118 GA Res. 2153 A(XXI), 17 Nov. 1966. GAOR, 21st Sess., Suppl. No. 16(A/6316), pp. 9-10. The resolution was adopted by 97 votes to 2, with 3 abstentions. Ibid., 1469th plen. mtg, 17 Nov. 1966, para. 65.

119 See the statement by the Pakistani representative in Ibid., 1st Cttee, 1442nd mtg, 4 Nov. 1966, paras. 2-21.

120 The original proposal was to hold the conference not later than July 1967. But the sponsors of the resolution subsequently accepted an amendment proposed by Kuwait to change the date as indicated above. Ibid., Anns. (Vol. II), a.i. 26 Doc. A/6509, 14 Nov. 1966, paras. 8 and 11.

121 GA Res. 2153 B(XXI), 19 Nov. 1966. Ibid., Suppl. No. 16 (A/6316), p. 10. The idea of associating the nuclear-weapon States with the conference was also proposed by Kuwait.

Pakistan, Peru, Spain and the United Republic of Tanzania.¹²² The resolution did not gain wide support as only 48 voted for it, while 59 abstained. India was the only country to vote against it.¹²³ The dominant feeling of those who abstained was that the proposed conference might prejudice the efforts of the ENDC in reaching a non-proliferation treaty. India's explanation of her vote was summed up in that "the basic features of this draft resolution are contrary to those in the other draft and to those in resolution 2028(XX); that it suggests remedies which are incomplete, ineffective and undesirable; and that its timing, in any case, is inappropriate."¹²⁴

The third resolution relating to non-proliferation adopted by the Assembly was under the item "Question of general and complete disarmament".¹²⁵ The UN Secretary-General was requested to prepare a concise report, with the assistance of qualified consultant experts appointed by him, on the effect of the possible use of nuclear weapons and on the security and economic implication for States of the acquisition and further development of these weapons.¹²⁶ The report was issued in October 1967 for the consideration of the 22nd session of the General Assembly.¹²⁷ The report will be referred to in the course of our analysis of the Treaty's provisions.

122 Ibid., 1500th plen. mtg, 20 Dec. 1966, paras. 191-193.

123 For the details of the voting, see Ibid., 1469th plen. mtg, 17 Nov. 1966, para. 67.

124 Ibid., para. 15. For the full text, see paras. 8-27 and 29-31.

125 GAOR, 21st Sess., Anns., a.i. 27, Doc. A/6529, 24 Nov. 1966.

126 GA Res. 2162 A(XXI), 5 Dec. 1966. GAOR, 21st Sess., Suppl. No. 16 (A/6316), pp. 10-11.

127 UN Doc. A/6858, 10 Oct. 1967. Later issued as Effects of the Possible Use of Nuclear Weapons and the Security and Economic Implications for States of the Acquisition and Further Development of These Weapons (New York : UN Pub. No. E.68.IX.1, 1968), hereinafter cited as Effects of the Possible Use of Nuclear Weapons.

The fourth resolution was adopted in relation to an item proposed by the Soviet Union entitled. "Renunciation by States of actions hampering the conclusion of an agreement on the non-proliferation of nuclear weapons".¹²⁸ The resolution urgently appealed to all States, pending the conclusion of a NPT :

"(a) To take all the necessary steps to facilitate and achieve at the earliest possible time the conclusion of a treaty on non-proliferation of nuclear weapons in accordance with the principles laid down in General Assembly resolution 2028(XX);

(b) To refrain from any actions conducive to the proliferation of nuclear weapons or which might hamper the conclusion of an agreement on the non-proliferation of nuclear weapons."¹²⁹

The ENDC in 1967 and the Identical Treaty Drafts of 24 August 1967

When the ENDC reconvened on 21 February 1967, there was hope that the consultations the United States was carrying out with the Soviet Union as well as with her NATO allies would have led to the tabling of an agreed draft to the Conference. However, as the nuclear-sharing arrangements within NATO seemed to have been settled, new difficulties arose. The main problem then was the degree of inspection which must be accepted on civil nuclear programmes to ensure that they are not diverted to military purposes.

The United States had originally hoped to complete the negotiations on certain points with the Soviets and submit them

128 GAOR, 21st Sess., Anns. (Vol. III), a.i. 97, Docs. A/6398, 23 Sept. 1966 and A/6496, 2 Nov. 1966. The main preoccupation of the Soviet Union was also the access to nuclear weapons by non-nuclear States, members of NATO and particularly the FRG, through the "division of nuclear responsibility" within the alliance.

129 GA Res. 2149(XXI), 4 Nov. 1966. Ibid., Suppl. No. 16 (A/6316), p. 9. The resolution was adopted by 101 votes to 1, with 1 abstention. Ibid., 1458th plen. mtg, 4 Nov. 1966, para. 43.

for the consideration of the Conference when it opened on 21 February. The Soviets objected and said then that they preferred to wait until a complete treaty draft had been worked out before agreeing to the submission of any text. The most important provision which was still missing was an Article III governing inspection.

The safeguards problem arose out of the existence of two international safeguards systems; one established by the International Atomic Energy Agency (IAEA) in Vienna, and another set up earlier by the European Atomic Energy Community. The Common Market countries were reluctant to allow the IAEA safeguards system to operate in their countries for fear it would result in abandonment of the Euratom system. They felt that such a result would have an unfavorable effect on progress towards European unity. The United States therefore had been clear that both systems should be permitted to continue.

The Soviet Union was agreeable to mandatory safeguards on the non-nuclear signatories of the treaty, but believed those safeguards should be administered by the IAEA. From the outset, the Soviets opposed the idea that the Euratom system was equivalent to IAEA, on the ground that Euratom inspection amounted to self-inspection.

The United States was trying to work out a solution satisfactory to their NATO allies in Euratom and, at the same time, acceptable to the Soviet Union. The official negotiations continued at the ENDC, which only discussed the question in a general way since no new draft text had been introduced at the Conference.¹³⁰

The ENDC held two sessions in 1967, the first from 21 February to 23 March, and the second from 18 May to 14 December. The recess that took place on 23 March, just after a one-month session, was at the request of the United States.

¹³⁰ See Hearings on Arms Control, 1968, pp. 29-30.

Mr. William Foster, the US Representative, made a tour of the European capitals - Bonn, Rome, Brussels, and The Hague - which had expressed a special interest to consult further in the light of developments concerning an article III. When it appeared that still more extensive consultations would be necessary before a complete text could be submitted, the US requested the recess.

After further extensive consultations with the United States' allies in Washington and other capitals, and in the North Atlantic Council, the US obtained a "green light" in the Council on April 20 to resume negotiations with the Soviet Union with a view to submitting a joint draft when the ENDC reconvened, which was on May 18.

A great deal of progress was made toward an agreed text during the recess. The US and its allies concurred that the major part of the agreed text could be presented to the Conference, leaving the unagreed portions, foremost of which was still the article on safeguards, for further negotiations between the US and the Soviet Union.¹³¹

When the ENDC reconvened on 18 May 1967, there was still no text of a draft treaty before the Conference. Besides the inspection issue there were many other issues to deal with, which were of special interest to non-nuclear-weapon States. The dominant ones were the peaceful uses of nuclear energy and especially the peaceful uses of nuclear explosions, security assurances to non-nuclear-weapon States renouncing the right to acquire nuclear arms, and the measures of nuclear disarmament that should be undertaken by the nuclear-weapon States. In general the sessions held by the ENDC in 1967 were the longest in its history and they constituted an important part in the negotiating history of the NPT, especially after the present-

¹³¹ Ibid., p. 30.

ation of the first two identical drafts by the United States and the Soviet Union on 24 August 1967.¹³² (See Appendix 3-D.)

It was apparently upon the Soviet Union's insistence on a principle of equality that two identical drafts were introduced.¹³³ The 24 August draft included a longer preamble than the previous American and Soviet 1965 separate drafts, and eight articles including an article III on inspection which was left blank. Negotiations on Article III continued throughout the summer. The Soviets suggested a new compromise draft safeguards article based in part on the April 20 NATO draft. This proposal was presented to the North Atlantic Council for discussion. The draft article was also discussed in the capitals of the alliance and in the European Atomic Energy Community (Euratom).¹³⁴

The first two articles contained the main obligations which foreclosed the possibility of establishing a MLF or an ANF. Article IV was on peaceful uses of nuclear energy, and the rest of the articles, the final clauses, were related, inter alia, to signature, adherence, entry into force, amendments procedures, revision, duration, and a withdrawal clause.

The discussions at the ENDC took a new turn. Instead of dealing with generalities, the delegations had a definite text, agreed to by the co-Chairmen, to deal with. Several proposals and amendments were submitted to the 24 August draft, not only

132 DCOR, Suppl. for 1967 and 1968, Ann. IV, Sec. 6 (ENDC/192, 24 Aug. 1967) and Sec. 8 (ENDC/193, 24 Aug. 1967).

133 Mason Willrich, Non-Proliferation Treaty : Framework for Nuclear Arms Control (Charlottesville, Virginia : The Michie Company, 1969), p. 63, hereinafter cited as Non-Proliferation Treaty. Concern for possible reactions from China was also offered as an explanation by one writer. James E. Dougherty, "The Treaty and the Nonnuclear States", Orbis, Vol. XI, No. 2, Summer 1967, p. 360.

134 See Hearings on Arms Control, 1968, p. 30.

from the eight non-aligned States but also from NATO and Warsaw Pact members.¹³⁵

In view of the approaching adjournment of the 22nd session of the General Assembly, the ENDC had decided to submit an interim status report to the Assembly, which was a very brief one.¹³⁶ Since the ENDC had intended to continue its work with a view to negotiating a NPT, it was unable to provide a comprehensive report on the question for the consideration of the Assembly. The ENDC had intended to submit a full report as soon as possible.¹³⁷

The UN General Assembly, 1967

The General Assembly at its 22nd session had very little time left in 1967 to consider its item on non-proliferation of nuclear weapons, which was divided into two sub-items : the report of the ENDC and the report of the Preparatory Committee for the Conference of Non-Nuclear Weapon States. The two sub-items were considered by the First Committee of the Assembly from 15 to 18 December 1967.¹³⁸ There was also the report of the UN Secretary-General on the "Effects of the possible use of nuclear weapons ..." referred to above. It was discussed at the Assembly as a sub-item (b) of the question of general and complete disarmament.¹³⁹

135 See DCOR, Suppl. for 1967 and 1968, Ann. IV.

136 Usually the sessions of the ENDC came to an end before the beginning of the UN General Assembly so it could submit its reports in due time for the Assembly's consideration. But in 1967 the ENDC's second session continued till December to allow for some progress on the 24 August draft.

137 GAOR, 22nd Sess., Anns. (Vol. II), a.i. 28, Doc. A/6951, 7 Dec. 1967.

138 Ibid., Doc. A/7016, 18 Dec. 1967.

139 Ibid., a.i. 29, Doc. A/7017, 18 Dec. 1967, paras. 5, 8 and 10,

On 19 December 1967, the Assembly adopted a resolution requesting the ENDC to submit to it on or before 15 March 1968, a full report on the negotiations regarding the NPT. It also recommended the setting of an early date after 15 March 1968 for the resumption of the 22nd session of the Assembly to consider the full report.¹⁴⁰

As for the Preparatory Committee set up to prepare for the Conference of Non-Nuclear-Weapon States, its report was submitted to the Assembly on 19 September 1967.¹⁴¹ In the course of 1967, the Committee held ten meetings at United Nations Headquarters in New York. A provisional agenda for the Conference was recommended by the Committee. The five items included in the agenda were :

- Methods of assuring the security of non-nuclear weapon-States.
- Implications of productions and acquisition of nuclear weapons by non-nuclear-weapon States.
- Prevention of the proliferation of nuclear weapons through co-operation among non-nuclear-weapon States.
- Programme for the peaceful uses of nuclear energy.
- Implementation of Conference decisions.¹⁴²

The Committee also decided to recommend that nuclear-weapon States should be invited to participate in the Conference with full rights except the right to vote.

As to the place and date of the Conference, the Committee recommended Geneva, from 11 March to 10 April 1968.¹⁴³

140 GA Res. 2346 A(XXII), 19 Dec. 1967. Ibid., Suppl. No. 16 (A/6716), pp. 16-17. The resolution was adopted by 112 votes to 1, with 4 abstentions. A/PV. 1640 (prov.), 19 Dec. 1967, pp. 68-70.

141 UN Doc. A/6817, 19 Sept. 1967.

142 Ibid., Ann. I.

143 The UN Secretariat had informed the Committee that the above mentioned date was the only suitable date for holding the Conference in Geneva. Ibid., para. 27.

On 19 December 1967, the Assembly adopted a resolution approving the recommendations of the Preparatory Committee with one exception concerning the date of the Conference. It was fixed from 29 August to 28 September 1968. The United States and the Soviet Union had, in fact, waged a successful campaign for the postponement of the Conference until the treaty was opened for signature. It was feared that the Conference would provide an opportunity for opponents of the NPT to mobilize their forces against it.¹⁴⁴ UN members as well as members of the specialized agencies and the IAEA were invited to participate in the Conference.¹⁴⁵

The resolution as opposed to the 1966 resolution was widely supported. It was adopted by 110 votes to none, with 8 abstentions including India which had voted against the previous resolution.¹⁴⁶ The wide support for the resolution was due to the fact that many non-nuclear-weapon States who were not in favour of the Conference at the 21st session of the Assembly were irritated over the fact that the ENDC was not very active during its last session.¹⁴⁷

The third question relating to non-proliferation was the aforementioned report of the Secretary-General on the "Effects of the Possible Use of Nuclear Weapons ...". On 19 December 1967, the Assembly adopted a resolution recommending the ENDC

144 Sherman, Nuclear Proliferation, p. 67. See also the testimony of Adrian Fisher, the Deputy Director of the ACDA in Hearings on Arms Control, 1968, pp. 59-60. Mr. Fisher explained that in accepting the adjournment of the Conference to August 1968, the proponents of the Conference had asked, in return, for a prompt resolution from the Assembly to the ENDC on a NPT.

145 GA Res. 2346 B(XXII), 19 Dec. 1967. GAOR, 22nd Sess., Suppl. No. 16 (A/6716), p. 17.

146 For the results of the voting, see A/PV.1640 (prov.), 19 Dec. 1967, p. 71.

147 Mr. Fisher's testimony in Hearings on Arms Control, 1968, p. 59.

to take into account the report and the conclusions thereof in its efforts towards the achievement of GCD under effective international control. Convinced that the wide dissemination of the report would contribute to a better understanding of the threat presented by nuclear weapons and encourage steady progress in the prevention of their spread, as well as in other measures of nuclear disarmament, the Assembly requested the UN Secretary-General to arrange for the reproduction of the full report as a UN publication¹⁴⁸ and publicize it in as many languages as were considered desirable and practicable. Other measures were also recommended to acquaint the public with its contents.¹⁴⁹

The ENDC, 1968 : The Identical Treaty Drafts of 18 January 1968 and the Joint Treaty Draft of 11 March 1968

On 18 January 1968, the ENDC reconvened again. By that time, the United States and the Soviet Union had agreed on a definite article III on inspection. Negotiations on article III to allow continuation of the Euratom safeguards was the subject of most elaborate consultations during the fall of 1967. As the United States is not a member of Euratom, its representatives attended NATO meetings in which Euratom countries expressed their point of view. The consultations came up with a formula which the United States presented to the Soviet Union on 2 November 1967, but these consultations broke up on 15 December in a rather inconclusive way. When the co-Chairmen came to Geneva, for the new round of talks at the ENDC, they met on 15 January, three days before the opening of the Conference. In that meeting the Soviets indicated that

148 See note 127 above.

149 See GA Res. 2342 A(XXII), 19 Dec. 1967. GAOR, 22nd Sess. Suppl. No. 16 (A/6716), p. 15. The resolution was adopted by 113 votes to none, with 1 abstention. A/PV. 1640 (prov.), 19 Dec. 1967, p. 22.

they were prepared to accept the language of the second November formula. The final Soviet approval of article III was communicated to the United States representative on the morning of 18 January, just a few hours before the inaugural meeting of the new session.¹⁵⁰ There were also many other changes in the previous 24 August draft that were agreed upon by the Co-Chairmen in their meetings in Geneva between 15 and 18 January.¹⁵¹

Two identical texts of a draft NPT were introduced to the ENDC on 18 January.¹⁵² The draft consisted of a preamble and eleven articles (see Appendix 3-E). The preamble was slightly shorter than the 24 August draft as some of its paragraphs were worked upon and developed into articles. Articles I and II remained unchanged. Article III contained four paragraphs. Article IV, on peaceful uses, was more elaborate than the preceding one. Articles V, VI and VII were all added to the new text. Article V is related to peaceful uses of nuclear explosions, Article VI to measures regarding cessation of the nuclear arms race and disarmament and Article VII to the right to establish denuclearized zones. The remaining Articles VIII to XI, the final clauses, were analogous to Articles V to VIII of the 24 August draft. However, they have all undergone considerable changes or additions except for the last one. The changes concerned amendments' procedures, entry into force and duration.

The ENDC during its short session of 1968, which came to an end on 14 March, was the most active session of the Conference on NPT. It was realized then that the session was the

150 See Mr. Fisher's testimony in Hearings on Arms Control, 1968, pp. 61-62.

151 Ibid., p. 62.

152 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 7 (ENDC/192/Rev. 1, 18 Jan. 1968) and Sec. 9 (ENDC/193/Rev. 1, 18 Jan. 1968).

last chance to contribute to the final elaboration of the treaty. On the one hand, the meetings of the Conference were more frequent. More questions and inquiries about the draft's provisions were addressed to the co-Chairmen. The latter provided extensive answers and interpretations of treaty provisions. The Conference became for the first time a virtual negotiating forum and not merely a place where statements were made to score a point for one country or another. Informal consultations were taking place almost daily and the two co-Chairmen took pains in those consultations to argue in favour of their drafts. Article III, for the first time submitted to the Conference, was the main subject of those consultations. On the other hand, several delegations either repeated their proposals and amendments which were not taken into consideration in the 18 January draft, or introduced new ones.

As the 18 January text was also silent on security assurances, several proposals were introduced to the Conference in this respect. But on 7 March 1968, the three nuclear-weapon States participating in the Conference submitted to it a draft Security Council resolution on the question.¹⁵³ The representatives of the three countries had stated that their Governments would make declarations of intention closely connected with the resolution.¹⁵⁴

On 11 March 1968, the United States and the Soviet Union submitted, for the first time, to the ENDC a joint draft treaty which took into consideration some of the suggested amendments and proposals made since the introduction of the 18 January

¹⁵³ DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. II (ENDC/222, 7 Mar. 1966).

¹⁵⁴ See ENDC/PV. 375, 7 Mar. 1968, pp. 5-6 (United States), pp. 8-10 (USSR); and p. 10 (United Kingdom).

text.¹⁵⁵ (See Appendix 3-E.) The 11 March draft differed from the previous one in three respects. It added a new preambular paragraph on discontinuance of nuclear weapons tests, Article VI was slightly modified to denote the urgency of measures regarding cessation of arms race, and Article VIII was modified and supplemented to allow for periodic review conferences.

The improvements realised by the 11 March draft were very meagre when compared to the considerable set of proposals and amendments submitted. The co-Chairmen were particularly unrelenting as far as Articles I, II, and III were concerned. They categorically refused any modifications to these articles which were, as pointed out above, carefully worked out and reflecting a delicate balance.

The full report of the Conference by the two co-Chairmen to the General Assembly and the Disarmament Commission was carefully drafted so as not to leave an impression that the 11 March draft was the draft of the Conference.¹⁵⁶

The General Assembly, Twenty-Second Resumed Session, 1968

The General Assembly resumed its 22nd session on 24 April 1968. The joint draft treaty was the subject of an extensive debate in the First Committee of the Assembly from 26 April to 10 June 1968.

On 1 May, the United States, the Soviet Union and 18 other countries submitted to the First Committee a draft resolution endorsing the 11 March text. A revised version of the draft was submitted on 3 May which was co-sponsored by nine more countries. On 28 May, a second and last revised version

155 For the text of the 11 March joint draft which was later transmitted to the Assembly, see DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. I.

156 For the text of the report, see Ibid., Docs. DC/230 and Add. 1, 19 Mar. 1968, pp. 1-37.

was introduced by the sponsors. The preamble was changed and added to. Other changes occurred in the operative part, most significant of which was that the Assembly would commend the NPT rather than endorse it.¹⁵⁷

The 11 March draft treaty had also been revised on 31 May. The changes which occurred in the draft were discreet changes and not on the basis of formal amendments. The preamble had been slightly changed and added to, Article IV was changed to meet the needs of the developing countries, and Article V was revised in the same direction. Moreover, the names of the Depository Governments : the Soviet Union, the United Kingdom, and the United States, were inserted in Article IX. The treaty's entry into force was to take place when the instruments of ratification had been deposited by these three States and 40 other countries.

The 31 May draft treaty was attached to the 28 May draft resolution which was adopted by the Assembly on 12 June 1968.¹⁵⁸ (See Appendix 3-G.) The resolution was adopted by 95 votes to 4, with 21 abstentions. The four countries voting against were Albania, Cuba, Tanzania and Zambia. Among the abstainers were France and three members of the ENDC; Brazil, Burma and India.¹⁵⁹ The positions of countries dissatisfied with the NPT will be treated in the course of the treaty's analysis.

The Security Council Resolution 255, 1968

On the same day of the adoption of the Assembly's resolution, the United States, the Soviet Union and the United Kingdom submitted to the Security Council their draft resolution

157 For these developments, see UN Docs. A/C.1/L.421, 1 May 1968; A/C.1/L.421, Rev. 1, 3 May 1968; and A/C.1/L.421/Rev. 2, 28 May 1968, See also GAOR, 22nd Sess., Anns. (Vol. II), a.i. 28, Doc. A/7016/Add. 1, 10 June 1968.

158 GA Res. 2373(XXII), 12 June 1968. Ibid., Suppl. No. 16 (A/6716/Add. 1), pp. 5-7.

159 A/PV. 1672 (prov.), 12 June 1968, pp. 28-30. As of 1 January 1980 none of them has acceded to the NPT.

of 7 March 1968 on security assurances. The Council met between 17 and 19 June 1968 where declarations were made by the three countries in conjunction with their draft resolution.¹⁶⁰ On 19 June, the draft was adopted by the Council without change.¹⁶¹ (See Appendix 4.) Ten countries voted in favour and five abstained.¹⁶²

Entry into force of the NPT

On 1 July 1976,¹⁶³ the Treaty was opened for signature at Washington, London and Moscow. It was signed on the same day by the three Depositary Governments and more than 50 countries. The Treaty entered into force on 5 March 1970 when, according to Article IX, the three Depositary Governments and forty other States signatory to the Treaty had ratified it and deposited their instruments of ratification. By 1 January 1980, the NPT had been ratified or acceded to by 112 States.¹⁶³

But between the 1st of July 1968 and the 5th of March 1970 events were taking place that had a direct bearing on the NPT. The Soviet Union and four other Warsaw Pact members intervened militarily in Czechoslovakia in August 1968. The Conference of the Non-Nuclear-Weapon States took place in Geneva between 29

160 SCOR, 1430th mtg, 17 June 1965.

161 Res. 255, 19 June 1968. SCOR, 23rd Yr., 1968.

162 The resolution was supported by the sponsors as well as by Canada, China, Denmark, Ethiopia, Hungary, Paraguay and Senegal. Those which abstained were Algeria, Brazil, France, India and Pakistan. SCOR, 1433rd mtg, 19 June 1968, para. 115.

163 See Appendix 26. Both the United States and the Soviet Union managed to ratify the Treaty on the same day, on 24 Nov. 1969. They had also deposited their instruments of ratification on the same day, on 5 March 1970. For their ratifications, see DOSB, Vol. LXI, No. 1590, 19 Dec. 1969, pp. 544-545 and New Times, No. 48, 3 Dec. 1969, p. 26.
On the same day, on 5 March 1970. For their ratifications, see DOSB, Vol. LXI, No. 1590, 19 Dec. 1969, pp. 544-545 and New Times, No. 48, 3 Dec. 1969, p. 26.

August and 28 September 1968. The Strategic Arms Limitation Talks (SALT) started in Helsinki on 17 November 1969. The International Atomic Energy Agency (IAEA) in Vienna had already started to undertake studies on the impact of the NPT on the Agency and more particularly on its safeguards system.

Czechoslovakia and the NPT

The Soviet Union's intervention in Czechoslovakia had its repercussions on the NPT. In the United States, Mr. Richard Nixon, who was then the Republican presidential nominee, called for Senate delay in consenting to the NPT.¹⁶⁴ By that time, the Senate Committee on Foreign Relations had already terminated its hearings on the NPT.¹⁶⁵ The events in Czechoslovakia and their relationship to the Treaty became of great concern to that Committee and were the subject of considerable discussions, particularly as to the appropriateness of approving the Treaty while Czechoslovakia was occupied by Soviet troops.¹⁶⁶ The prevailing view in the Committee was that, while the Soviet actions were deplorable, the Treaty itself was multilateral in character and of such significance as a potential barrier to the further spread of nuclear weapons that any delay in taking final Committee action was inadvisable. On 17 September 1968, the Committee, by voting 13 in favour, 3 against, with 3 abstentions, recommended the Senate to give

164 International Herald Tribune, 9 Sept. 1968.

165 US Congress, Senate, Committee on Foreign Relations, Hearings : Nonproliferation Treaty, 90th Congress, 2nd Session on Executive H, 1968 (Washington, D.C. : US Government Printing Office, 1968), hereinafter cited as Hearings on NPT, 1968.

166 US Congress, Senate, Committee on Foreign Relations, Report Together With Supplement Views : Treaty on the Nonproliferation of Nuclear Weapons, Senate Executive Report No. 91-1, 91st Congress, 1st Session (Washington, D.C. : US Government Printing Office, 1969), pp. 13-14, hereinafter cited as Report on NPT, 1969.

its advice and consent to ratification of the Treaty.¹⁶⁷ However, and though the President and the Secretary of State renewed their pleas for Senate ratification, the Senate, on 11 October 1968, postponed action on the NPT until the following year.¹⁶⁸ Senator Mansfield, the Senate Democratic leader, announced that he had decided not to call the Treaty up for consideration in the Senate because of the "formidable procedural obstacle" arising from the election campaign.¹⁶⁹

The Senate Committee on Foreign Relations held a second round of hearings in February 1969,¹⁷⁰ in which the new American Administration took part. President Nixon was then in favour of the Treaty.¹⁷¹ In the Committee the view prevailed again that while the Soviet action warranted continued condemnation, the prompt ratification of the Treaty was in the national interest. On 25 February 1969, the Committee by a vote of 14 in favour, with one Senator not taking part in the vote, recommended the Senate to give its advice and consent to ratification of the pending Treaty.¹⁷² The United States Senate gave its advice and consent on 13 March 1969 by a vote of 83 to 15.

167 Ibid., p. 20. For the minority views of the Senators on the events in Czechoslovakia, see the Committee's first Executive Report No. 9, dated 26 Sept. 1968 in Congressional Digest, Vol. 48, No. 1, Jan. 1969, p. 15.

168 The Times, 12 Oct. 1968.

169 International Herald Tribune, 12-13 October 1968.

170 US Congress, Senate, Committee on Foreign Relations, Hearings : Nonproliferation Treaty (Part 2), 91st Congress, 1st Session on Executive H, 1969 (Washington, D.C. : US Government Printing Office, 1969), hereinafter cited as Hearings on NPT, 1969.

171 In his press conference on 6 Feb. 1969, President Nixon said that he did not gloss over the fact that he still very strongly disapproved of what the Soviet Union had done in Czechoslovakia and what it still was doing. But on balance he considered that it was the time to move forward on the Treaty. See statement by Secretary of State Rogers in Hearings on NPT, 1969, p. 306.

172 Report on NPT, 1969, p. 20.

Events in Czechoslovakia had also contributed to a delay in the Treaty's signature by some countries in Europe, especially Italy and the Federal Republic of Germany.¹⁷³

The Soviet Union's intervention in Czechoslovakia had a great impact on Soviet information strategy. Until mid-September, the Soviet information media remained silent on the NPT, seemingly lacking instructions on how to deal with the new position. When the NPT was taken up again, serious concern over the influence of anti-non-proliferation proponents in the United States and over increasingly negative attitude of the West German leaders was clearly discernable. The Soviet information media tried in various ways to counteract the trend.¹⁷⁴ For example, the United States was warned that a change of attitude might render the relations between the greatest world Powers as bad as they had been during the first days of the cold war. The United States was informed that Bonn was exploiting the events in Czechoslovakia in order to justify its unwillingness to sign the NPT.¹⁷⁵

The Soviets, at one point, claimed the right under articles 53 and 107 of the UN Charter to intervene by force unilaterally in the FRG.¹⁷⁶ The United States, the United Kingdom and France issued statements in September 1968, which made clear that the Soviet Union had no right under these articles to intervene by force unilaterally in the FRG. The United States had also stated at that time that it believed the Soviets clearly understood

173 Italy signed on 28 Jan. 1969 and the FRG on 28 Nov. 1969. SIPRI Yearbook 1973, pp. 444 and 450.

174 Wettig, loc.cit., pp. 1079-1080.

175 Ibid.

176 Article 107 stipulates that : "Nothing in the present Charter shall invalidate or preclude action, in relation to any State which during the Second World War has been an enemy of any signatory to the present Charter, taken or authorized as a result of that war by the Governments having responsibility for such action." See also article 53.

that its intervention by force in the FRG would lead to an immediate response by NATO. In early 1969, Secretary of State Rogers met the Soviet Ambassador to urge Soviet adoption of a different position on these articles. Afterwards, in a series of meetings between German and Soviet officials, an additional assurance was given by the Soviet Union to the FRG which gave them some consolation.¹⁷⁷

As to the three remaining events, they are very much related to the implementation phase of the NPT and accordingly they will be treated in the context of the Treaty's analysis. The Conference of Non-Nuclear-Weapon States dealt with all the questions that were raised during the formulation phase of the NPT. It issued a declaration and adopted a set of resolutions, the final one of which invited the General Assembly to consider the ways and means of implementing the decisions taken by the Conference.¹⁷⁸ The SALT continued taking place alternatively in Helsinki and Vienna, and later in Geneva. These talks will be dealt with in conjunction with the study of Article VI of the NPT. The IAEA work relating to the NPT will be studied in the context of the analyses of Articles III, IV and V of the Treaty.

* * * * *

177 See the answer of Gerard Smith, Director of the ACDA to a question asked by Senator Thurmond in US Congress, Senate, Committee on Armed Services, Hearings : Military Implications of the Treaty on the Nonproliferation of Nuclear Weapons, 91st Congress, 1st Session, 1969 (Washington, D.C. : US Government Printing Office, 1969), p. 123, hereinafter cited as Hearings on Military Implications of NPT,

178 For the final document of the Conference, see UN Doc. A/CONF.35/10, 1 Oct. 1968. For a brief summary of the results of the Conference, see the information furnished by the ACDA for the record of the Senate Committee on Foreign Relations in Hearings on NPT, 1969, pp. 342-345. For a survey of views and proposals at the Conference, see Ibid., pp. 450-461.

To sum up, the treaty-making process of the Non-Proliferation Treaty was a long and a complicated one. Since the adoption of the "Irish Resolution" of 1961, it took almost ten years of continued effort to accomplish the Treaty. Yet, the Treaty's entry into force was just the beginning of a new negotiating phase to make out of it an effective instrument to avert the proliferation of nuclear weapons.

At the beginning, the process was very slow and cautious. It took the form of either a general discussion of the subject matter of the Treaty or bilateral talks between the United States and the Soviet Union. The meeting of the Disarmament Commission in 1965 was a dividing line between the former phase and a new active one starting with the 1965 session of the ENDC and the introduction of a first treaty draft. Since then, the process of treaty-making took a variety of forms. A general discussion of the problem had continued, but bilateral and multilateral negotiations in various places and different organs were intensified, more treaty drafts were introduced, counter proposals and amendments were also presented and the negotiations tended towards the solution of specific problems in order to reach a final agreement. The ENDC was at the centre of all these negotiations.

The problems encountered were not only arising in the relations between East and West or between nuclear and non-nuclear-weapon States, but also between allies, members of an alliance or between non-committed nations such as the non-aligned countries. Problems were not always solved to the satisfaction of all participants in the negotiations. This was impossible to attain in view of their divergent interests and priorities.

In the two phases of the negotiations, the outstanding problem between East and West was the nuclear-sharing arrangements within NATO. Countries members of the latter were also

not always in agreement on the feasibility of the proposed projects such as the MLF or the ANF.

In the second phase, the formulation of Article III on inspection had met considerable difficulties raised by the Euratom countries who wished to continue with their own system of inspection.

The non-nuclear-weapon States were particularly concerned with problems of vital interest to their security and economic development. Disarmament measures by the nuclear-weapon States and nuclear guarantees were sought. Peaceful uses of nuclear energy and the development of peaceful nuclear explosions received considerable attention from the developing and developed countries alike.

In general, there was a persistent trend for a definite treaty text rather than unilateral undertakings such as the non-acquisition declaration suggested by Italy. The persistence was most apparent in the attitude of the United States and the Soviet Union, especially since the presentation of their first identical drafts of 24 August 1967. The Vietnam war did not seem to be an obstacle for negotiating the treaty. Soviet negotiators had sometimes left the impression that it would. The Middle-East war of June 1967 had no effect on the continuation of the negotiations between the co-Chairmen of the ENDC that led to the tabling two months later of their 1967 identical drafts. The Czechoslovak crisis of August 1968, almost two months after the NPT was opened for signature, had raised doubts for some time as to the possibility that the treaty would ever enter into force.

A remarkable feature of the NPT negotiations was the perseverance with which both the United States and the Soviet Union pursued their common drive for urgently concluding the Treaty. We need not reiterate here the motives that had driven the two countries to follow such a course.

Now that the foundation and the course of negotiations of the NPT have been dwelt on, it is possible to analyse the Treaty's provisions and its implementation on the basis of the five principles of General Assembly Resolution 2028(XX). Under principle (a), however, the problem of nuclear sharing within NATO ought to be explored much further.

PART II

"The treaty should be void of any loop-holes which might permit nuclear or non-nuclear Powers to proliferate, directly or indirectly, nuclear weapons in any form"

(Principle (a))

CHAPTER 4

Plans for Nuclear Sharing within NATO and Non-Proliferation

In Chapter 2, it has been shown that principle (a) of General Assembly Resolution 2028(XX) was originally closely associated with the plans for nuclear sharing within NATO and, more specifically, the American proposal for establishing a multilateral nuclear force (MLF). As previously demonstrated in Chapter 3, the MLF was for a certain time the major obstacle to progress in negotiating the NPT. In particular, the formulation of Articles I and II, as they have finally materialised, entailed lengthy bilateral negotiations between the United States and the Soviet Union towards an agreement precluding any possibility of loop-holes especially those which could lead to the proliferation of nuclear weapons through military alliances.

It is therefore in the first place appropriate to tackle the problem of nuclear sharing within NATO, and this especially may permit a clearer understanding of the limits imposed by Articles I and II. It will also be shown how far this problem was at the centre of the debates on non-proliferation of nuclear weapons in Europe as was the credibility of United States' guarantees to its allies in NATO. Moreover, the fact that there was no prospect of success for a non-proliferation treaty without settling the problem of nuclear sharing within NATO to the satisfaction of the two blocs facing each other in Europe, makes a study of the problem essential.

In dealing with the problem, which is of such complexity that it may not be fully explored within the limits of this study, we shall confine ourselves to the direct issues involved in the NPT negotiations. We therefore have no intention to go into the origins and earlier developments of nuclear sharing within NATO which could be traced back to what may be called the pre-Nassau era.¹ In Nassau (The Bahamas), where the President of the United States, John F. Kennedy, and the Prime Minister of the United Kingdom, Harold Macmillan, met in December 1962, two different approaches to the problem of nuclear sharing within NATO could be discerned : a multilateral approach espoused by the United States and a multinational one favoured by the United Kingdom. The post-Nassau era was dominated by the MLF for almost two years (1963-1964) after which the Atlantic Nuclear Force (ANF), a basically multinational project, was proposed by the United Kingdom at the end of 1964

1 For a reasonable understanding of the origins and earlier developments of nuclear sharing within NATO the following works and articles are recommended : Christian A. Herter, Toward an Atlantic Community (New York : Harper and Row, 1963); Henry A. Kissinger, The Troubled Partnership. A Re-Appraisal of the Atlantic Alliance (New York : McGraw-Hill, 1965), hereinafter cited as The Troubled Partnership; Urs Schwarz, American Strategy : A New Perspective. The Growth of Politico-Military Thinking in the United States (Garden City, New York : Doubleday, 1966); Alastair Buchan, "The Multilateral Force : An Historical Perspective", Institute for Strategic Studies (London), Adelphi Papers, No. 13, Oct. 1964, hereinafter cited as "The Multilateral Force"; Robert Osgood, Nuclear Control in NATO (Washington, D.C. : The Washington Center of Foreign Policy Research, 1962), and The Case for the MLF : A Critical Evaluation (Washington, D.C. : The Washington Center of Foreign Policy Research, 1964); Irving Heymont, "The NATO Bilateral Forces", Orbis, Vol. IX, Winter 1966, pp. 1025-1041; Jeffrey Smith, "NATO Nuclear Information-Sharing Arrangements and the Non-Proliferation Treaty : Collective Defence Confronts Arms Control", Atomic Energy Law Journal, Vol. 13, No. 4, Winter 1972, pp. 356-357; and Thoma C. Wiegler, "The Origins of the MLF Concept, 1957, 1960", Orbis, Vol. XII, No. 2, Summer 1968, pp. 465-489.

as a serious competitor. Since neither project met with the approval of all NATO allies, not to mention the considerable resistance they had encountered in the Soviet bloc, a less ambitious substitute, the NATO's Nuclear Planning Group (NPG), has emerged as the only acceptable alternative for nuclear strategy planning within NATO.

Before dealing with the three schemes, i.e., the MLF, the ANF and the NPG it is necessary to treat briefly the Nassau meeting, which may be considered as the direct instigator of these concrete schemes for nuclear sharing.

I. Nassau : Multilateralism versus Multinationalism

The Nassau meeting had been scheduled originally to review the world situation in the aftermath of the October 1962 Cuban missile crisis. In December 1962, however, the United States had cancelled the Skybolt-missile programme, an air-to-surface missile, which the United Kingdom Conservative Government had hoped to rely upon to bolster its independent deterrent by extending the life of its V-bombers threatened with obsolescence. The Nassau meeting was therefore transformed into a redefinition of the American-British nuclear relationship.² The outcome of the meeting was in this respect reflected in the "Statement on Nuclear Defence Systems" attached to the Joint Communiqué of 21 December 1962. Paragraphs 6, 7 and 8 of the "Statement" read as follows :

"6. The Prime Minister suggested, and the President agreed, that for the immediate future a start could be made by subscribing to NATO some part of

2 Kissinger, The Troubled Partnership, pp. 80-82. For an account of the Skybolt affair, see Henry Brandon, "Skybolt. The Full Inside Story of How a Missile Nearly Split the West", The Sunday Times (Weekly Review), 8 Dec. 1963, pp. 29-31; A.J.R. Groom, British Thinking about Nuclear Weapons, IUHEI, Thèse No. 210, 1971, pp. 243-245 (mimeo); Richard E. Neustadt, Alliance Politics (New York : Columbia University Press, 1970), Chapter III, pp. 30-55; and A. Schlesinger, op.cit., pp. 730-736.

the force already in existence. This could include allocations from United States strategic forces, from United Kingdom Bomber Command, and from tactical nuclear forces now held in Europe. Such forces would be assigned as part of a NATO nuclear force and targeted in accordance with NATO plans.

7. Returning to Polaris, the President and the Prime Minister agreed that the purpose of their two Governments with respect to the provision of the Polaris missiles must be the development of a multilateral NATO nuclear force in the closest consultation with other NATO allies. They will use their best endeavours to this end.

8. Accordingly, the President and the Prime Minister agreed that the United States will make available on a continuing basis Polaris missiles (less warheads) for British submarines. The United States will also study the feasibility of making available certain support facilities for such submarines. The United Kingdom Government will construct the submarines in which these weapons will be placed and they will also provide the nuclear warheads for the Polaris missiles. British forces developed under this plan will be assigned and targeted in the same way as the forces described in Paragraph 6.

These forces, and at least equal United States forces, would be made available for inclusion in a NATO multilateral nuclear force. The Prime Minister made it clear that, except where her Majesty's Government may decide that supreme national interests are at stake, these British forces will be used for the purpose of international defence₃ of the Western Alliance in all circumstances."

The ambiguities of the "Statement" raised a series of interpretations. Ambiguities were due to both sides being uncertain as to what was meant and wanted and to the absence of both State Department experts and an agreed United States position.⁴ Western experts had made varied interpretations which not only demonstrated the complexity of the language in which

3 DOSB, Vol. XLVIII, No. 1229, 14 Jan. 1963, p. 44.

4 Theodore C. Sorensen, Kennedy (London : Hodder and Stoughton, 1965), pp. 567-568.

the "Statement" was drafted but also reflected a preference for one approach or another.⁵

The conclusion that may be drawn is that there were in fact two different approaches intermingling with each other in the Nassau Statement : a multilateral as well as a multinational one. The term "multilateral" in the few weeks after Nassau was used interchangeably for either approach.⁶ Only later developments drew the two approaches distinctively apart, the United States espousing the MLF and the United Kingdom favouring a multinational force.

The Nassau meeting was a great success for the Conservative Government of Mr. Macmillan which managed to conserve a measure of independence for the British nuclear deterrent.

The goals that the United States had sought to pursue in Nassau by a multilateral force had appeared to be the following :

- Non-proliferation of nuclear weapons in Europe by bringing United Kingdom and France nuclear forces into an integrated multilateral force. This would have had the particular effect of discouraging an independent German nuclear force.
- Minimizing United States' preferential treatment of the United Kingdom, thus paving the road to European unity.
- Meeting charges of American Nuclear Monopoly and at the same time reducing United States defence spending in Europe by creating a force in which costs would be shared.
- Improving Western strategic defence forces.⁷

5 See Kissinger, The Troubled Partnership, pp. 82-83; A. Schlesinger, op.cit., p. 738; Sorensen, op.cit., p. 567; Buchan "The Multilateral Force", p. 7; and André Beaufre, "The Sharing of Nuclear Responsibilities. A Problem in Need of Solution", International Affairs (London), Vol. 41, No. 3, July 1963, p. 412.

6 Kissinger, The Troubled Partnership, p. 131.

7 For example, see Sorensen, op.cit., p. 568.

How far those goals were attained could only be appreciated in the light of the developments that had taken place in the couple of years following the Nassau meeting.

It was in line with the aforementioned second goal that it was decided in Nassau to offer President de Gaulle Polaris missiles on the same terms. In his biography of President Kennedy, Arthur Schlesinger explains that the offer was an entirely genuine proposal, though made publicly, informally and without the ceremony de Gaulle might have expected. Kennedy had hoped that it might throw the French a bridge back to NATO.⁸

President Kennedy, impressed by the contention that Nassau had given Bonn a dangerous sense of exclusion, and sensitive as always to immediate pressures, agreed that a modest refloating of the MLF might pull the Federal Republic of Germany (FRG) back towards the Alliance and offset Chancellor Adenauer's growing fascination with de Gaulle. Accordingly, early in January 1963, Under-Secretary George Ball was sent to Europe to reassure the Germans.⁹

But in both Paris and Bonn the course of events took a dramatic turn in January 1963 which was to give the MLF a new lease of life.

In Paris, on the 14th of January, President de Gaulle, in a press conference vetoed British entry into the Common Market and refused the Polaris offer.¹⁰ He said the following :

8 A. Schlesinger, op.cit., pp. 738-739.

9 Ibid., p. 739.

10 For a full account of the press conference, see Le Monde, 16 Jan. 1963, pp. 2-3. For an English translation of the parts related to de Gaulle's views on the Nassau agreement, the Atlantic Alliance and the principles of a national nuclear force, see "President De Gaulle's Views", Survival, Vol. 5, No. 2, Mar.-Apr. 1963, pp. 58-59 and 62.

"It would really not be of use to buy Polaris missiles when we have neither the submarines to launch them nor the thermo-nuclear heads to arm them."¹¹

But the reasons were more complex than just a mere question of technical capabilities. De Gaulle continued to say :

"... this affair is of no apparent interest to us. What is more it does not comply with the principle ... which for us consists of having at our disposal our own atomic force.

If we subscribe our means to a multilateral force, under foreign command, we shall contravene this capital principle of our defence and our policy. It is true that we, too, could retain, theoretically, the possibility of recovering our atomic weapons in a supreme contingency. But how would we do it, practically, in the unparalleled moment of the atomic apocalypse ? And, moreover, this multilateral force would forcibly entail such a tangle of liaison, communications, interferences, and an envelopment of external servitude, that if an integral part were suddenly torn from it, it would be paralysed just at the moment when perhaps it should go into action.

All things considered we hold to the decision that we have made : build and, should the need arise, use our own atomic force, without of course refusing co-operation, be it technical or strategic, if such co-operation is desired by our allies."¹²

The Nassau meeting had confirmed to de Gaulle the special Anglo-American relationship and its domination of the Alliance. The most fundamental reason for his rebuttal of the MLF was his fear of American management of the force de frappe.¹³

In Paris, on 22 January 1963, just a few days after de Gaulle's press conference, the Treaty on Franco-German Co-operation was signed by President de Gaulle and Chancellor Adenauer.¹⁴

¹¹ Ibid., p. 59.

¹² Ibid., p. 62.

¹³ For an analysis of de Gaulle's refusal of the Polaris offer, see Wilfrid Kohl, French Nuclear Diplomacy (Princeton, N.J. : Princeton University Press, 1971), pp. 233-235.

¹⁴ For the text of the Treaty, see Le Monde, 24 Jan. 1963, p. 2. For a translation of the Treaty parts relating to

The objectives to be pursued in the field of defence do not include co-operation in the field of nuclear armaments. However, it was precisely United States' fear of such co-operation in the future, plus the exclusion of the United Kingdom from the EEC and French refusal of the MLF, that generated United States' enthusiasm and determination to go ahead with a MLF without France, and apparently to isolate France and arrest Franco-German co-operation, among other objectives.¹⁵

II. The Multilateral Nuclear Force

On March 1963, a first concrete proposal on a MLF was submitted by the United States to its allies.¹⁶ For almost two years after, contacts had not ceased to take place in different capitals as well as within NATO. Emissaries were sent by the United States to Europe to explain and exchange views. On the other hand European statesmen visited the United States to explore and measure American determination to continue with the scheme. The zeal of the American Administration to push ahead with the MLF varied between leaving Europeans to make up their own minds about it, as President Kennedy preferred,¹⁷ to strong

defence as well as Le Monde's report on the fields in which Franco-German co-operation would be carried out, see "The Franco-German Treaty", Survival, Vol. 5, No. 2, Mar.-Apr. 1963, p. 63.

- 15 For example, see Kissinger, The Troubled Partnership, pp. 127-128, 138 and 206-207, and Buchan, "The Multilateral Force", p. 10.
- 16 See President Kennedy's press conference on 6 March 1963 in which he tackled the MLF and the mission of Ambassador Livingston Merchant, his special envoy to Europe, who was visiting Bonn at the time. The New York Times (Western Edition), 7 Mar. 1963, pp. 1-2 and 4. See also Buchan, "The Multilateral Force", p. 8.
- 17 See A. Schlesinger, op.cit., p. 725. US Under-Secretary of State George Ball related the MLF's failure to Kennedy's indecisiveness during the crucial years of 1961-1962. Kennedy was hesitant and not convinced. George Ball, The Discipline of Power. Essentials of Modern World Structure (Boston : Little, Brown and Co., 1968), pp. 207-209.

support and pressure after President Johnson gave it formal attention at a meeting of the Associated Press on 20 April 1964.¹⁸ For the dedicated advocates of the MLF in the State Department it was an occasion to act swiftly. A special MLF task force was established in the State Department headed by Gerard Smith, who was given the title of Special Adviser to the Secretary of State.¹⁹

Our object is first to examine the latest conceived MLF plan. Secondly, to examine the positions of United States' allies, the Soviet Union and its allies and the non-aligned members of the ENDC who were in a delicate position, being at the conference table where a substantial controversy between the United States and the Soviet Union was taking place on the MLF. Thirdly, a final assessment of the MLF will be made in the light of the goals the proposal sought to attain. As to the developments which had led to its demise, they are examined in conjunction with the ANF proposal and the emergence of the NATO Nuclear Planning Group (NPG).

1. Envisaged Composition, Operation and Control of the MLF

Since 11 October 1963, a working group composed of the NATO Ambassadors of seven interested allies had been meeting in Paris and conducting technical discussions on the MLF. The

18 See Philip Geyelin, Lyndon B. Johnson and the World (New York : Praeger, 1966), p. 160. For the text of Johnson's statement, see The New York Times, 21 Apr. 1964, p. 14. Prime Minister Harold Wilson had found President Johnson to be pressing the MLF with more fervour than Kennedy. Harold Wilson, The Labour Government 1964-1970. A Personal Record (London : Weidenfeld and Nicolson and Michael Joseph, 1971), p. 43.

19 Geyelin, op.cit., p. 164. One of the best early accounts on the MLF was made by Gerard Smith before the US Naval Academy Foreign Affairs Conference at Annapolis, Md. on 22 April 1964. See DOSB, Vol. L, No. 1299, 18 May 1964, pp. 783-790.

countries represented were the United States, the United Kingdom, the Federal Republic of Germany, Italy, Belgium, Greece and Turkey. The Netherlands joined the group in January 1964.²⁰ The group was meeting at NATO Headquarters but was not a NATO body to avoid French objections.²¹ The group was divided in several sub-groups.²²

The group's primary tasks were first, to draft official military and legal reports to be submitted to Governments in preparation for drawing up a MLF charter, which must be ratified by the Governments participating in the force, and secondly to prepare for an experiment of a mixed-manned surface ship.²³

As far as the United States was concerned, the MLF, in order to represent a truly international force, was to meet four conditions : to be assigned to NATO by the participating countries and not by any one country; not to be predominantly based on the soil of any one nation; to be managed and operated by nationals of all participating countries in such a way as to be unavailable for withdrawal to serve the national interests of any participating government; and the use of the force to be politically controlled by a collective decision of the participating nations,²⁴

By the end of October 1964, the elaborated MLF plan was substantially the same as the March 1963 plan. It had also reflected the above mentioned requirements.

20 See Wilfrid L. Kohl, "Nuclear Sharing in NATO and the Multilateral Force", Political Science Quarterly, Vol. LXXX, No. 1, Mar. 1965, p. 91.

21 Harlan Cleveland, NATO. The Transatlantic Bargain (New York : Harper and Row, 1970), p. 49.

22 André Fontaine, "Histoire de la force multilatérale", Le Monde, Vth article, 20 Nov. 1964, p. 3.

23 Kohl, "Nuclear Sharing in NATO and the Multilateral Force", p. 21.

24 G. Ball, "The Nuclear Deterrent and the Atlantic Alliance" DOSB, Vol. XLVIII, No. 1246, 13 May 1963, p. 738.

The MLF was to be composed of 25 surface ships, each carrying eight A-3 Polaris missiles with a range of 2,500 miles. Each ship was to be manned by crews drawn from at least three nationalities. No nation was to contribute more than 40 per cent of the total. Command of the ships was to be in proportion to the financial contribution. The Federal Republic of Germany was to be by far the largest contributor, paying close to 70 per cent of the European share. The Control System was not decided, but it seemed that an executive body in which all participants would be represented would make decisions, at least initially, on the basis of unanimity. The timetable called for signing a treaty on the MLF by the end of 1964, with ratification taking place sometime during 1965.²⁵

Without going into a closer examination of the MLF components,²⁶ we would single out the control system, the most thorny and central aspect of the MLF. What is meant by control here is

25 Kissinger, The Troubled Partnership, p. 135.

26 For a closer examination of MLF components, see Robert Bowie in Assembly of Western European Union, Proceedings, 9th Sess., Part 2, IV, Dec. 1963, pp. 126 and 131; Cleveland, op.cit., p. 49; Kohl, "Nuclear Sharing in NATO and the Multilateral Force", pp. 91-92 and 94-95; A. Schlesinger, op.cit., p. 725; Ball, "The Nuclear Deterrent and the Atlantic Alliance", p. 94; Michel Eyraud, "La force multilatérale", Stratégie, No. 2, Oct.-Dec. 1964, p. 108; Eugène Hinterhoff, "Reflexions sur la force multilatérale", Politique Etrangère, 30e année, No. 1, 1965, p. 52; and Claude Ricketts, "The Case for the Multilateral Force", European Review, Vol. XIII, No. 3, Summer 1963, pp. 9-12. With respect to the experiment of a mixed-manned surface ship (USS Biddle renamed Claude Ricketts), see Bulletin of the Atomic Scientists, Vol. XX, No. 7, Sept. 1964, p. 5; Cleveland, op.cit., p. 50; Neville Brown, "A New Policy for NATO ?", The World Today, Vol. 20, No. 10, Oct. 1964, p. 424; Eyraud, "La force multilatérale", p. 106 (footnote 1); and M. Maratov, "Non-Proliferation and NATO Nuclear Plans", International Affairs (Moscow), No. 1, Jan. 1966, p. 19.

not so much the operational handling of the force but rather the political decision to use or not to use the force.²⁷

Control was sidestepped simply because American negotiating tactics were deliberately designed to avoid difficult political issues.²⁸ During the MLF negotiations, little attention was paid to the issue. The United States took the view that since the MLF did not exist the issue of nuclear control need not be faced until later.²⁹

Official spokesmen implied, however, that the United States was willing to consider a modification of the initial control arrangements including giving up the veto on the use of the force.³⁰ To be specific, pending proposals at the end of 1964 called for two things :

First, all of the members would consult and share by majority rule in the strategic planning on the use of the MLF. In a crisis a smaller group composed of the major participants would share in the control over the use of the missile force according to the unanimity principle; each major participant would have a veto. This control body would probably have been made up of the United States, the United Kingdom, the Federal Republic of Germany, and either Italy or possibly a rotating small-power representative. Such a formula would not have been a final solution.³¹

27 Alastair Buchan makes a distinction between the French concept of contrôle which means examination, verification and the right to criticise, and the English word control which means the physical grasp of the buttons and levers. Alastair Buchan, "The Reform of NATO", Foreign Affairs, Vol. 40, No. 2, Jan. 1962, p. 134.

28 Kissinger, The Troubled Partnership, p. 134.

29 Ibid., p. 144.

30 Ibid.

31 Kohl, "Nuclear Sharing in NATO and the Multilateral Force", pp. 97-98.

A few days before he became President of the United States, Lyndon Johnson said in Brussels on 8 November 1963 that :

"The movement to European unity makes this (the MLF) desirable - as a first step toward a greater European voice in nuclear matters. Evolution of this missile fleet toward European control, as Europe marches toward unity, is by no means excluded."³²

It seemed clear that the United States would have retained its veto in the MLF for some time, probably for at least a decade, since about six years would have been required to put the full force into operation.³³ Later on the MLF could have evolved in either of two ways. Robert Bowie, who is supposed to be one of the originators of the MLF idea, maintained the view that it was feasible to start towards the creation of an integrated force without waiting to settle finally the form of control.³⁴ In his view, it was almost certain that control "would evolve in such a way as to get away from the unanimity principle towards some form of an Atlantic force controlled with less than unanimity, or a European force which the European members would control according to whatever formula they decided upon ..."³⁵ This has come to be known as the "European option".³⁶

32 DOSB, Vol. XLIX, No. 1275, 2 Dec. 1963, pp. 853-854.

33 Kohl, "Nuclear Sharing in NATO and the Multilateral Force". p. 98.

34 See Robert Bowie, "Tensions within the Alliance", Foreign Affairs, Vol. 42, No. 1, Oct. 1963, p. 67. For a further understanding of Bowie's views, see also "Strategy and the Atlantic Alliance", International Organization, Vol. XVII, No. 3, Summer 1963, pp. 709-711.

35 Robert Bowie in Assembly of Western European Union, Proceedings, 9th Sess., Part 2, IV, Dec. 1963, pp. 127-128.

36 William Bader notes that the "European option" has its root, if it has roots anywhere, in a speech given by McGeorge Bundy (the Special Assistant to President Kennedy for National Security Affairs) in Copenhagen in September 1962. For the relevant part, see William Bader, The United States and the Spread of Nuclear Weapons, p. 47.

2. The Positions of NATO Allies, Warsaw Pact Members and the Non-Aligned

(a) NATO Allies

Due to the limits imposed by the scope of the study, the positions of the major allies will receive our primary attention but without neglecting to state briefly the position of the other allies. As the Federal Republic of Germany was at the centre of all the discussions on MLF, we will start first with her position, followed by that of the United Kingdom, the major nuclear ally, and then France, which had kept its distance from the discussions. A final section is allotted to the remaining allies.

(i) The Federal Republic of Germany : One of the MLF objectives, as previously mentioned, was to discourage the emergence of an independent German nuclear deterrent. But, in the first place, was there really a German appetite for nuclear weapons ?³⁷

The 1954 undertaking by the Federal Republic of Germany not to manufacture on its own territory any atomic weapons³⁸ has never been questioned by any Government official. The Government, as well as the opposition, have repeatedly stated that national control of nuclear weapons cannot and must not be an aim of German policy.³⁹

Moreover, a study of current and prospective European attitudes to arms control and disarmament undertaken in 1963-1965 has shown that an overwhelming majority of Germans rejected nuclear weapons for Germany, as neither necessary nor

37 See Theo Sommer, "The objectives of Germany" in Buchan (Ed.), A World of Nuclear Powers ?, pp. 39-54 and John N. Zedler, The Multilateral Force: A Misreading of German Aspirations (Los Angeles : University of California, 1968) (Security Studies Paper No. 14).

38 See UNTS, Vol. 211, pp. 364 and 368.

39 Sommer, "The Objectives of Germany", p. 39.

credible, and - this latter, too, by a staggering 95 per cent - not worth the cost. German demand for nuclear weapons was considered a myth. There was not sufficient strength behind any such demand in the Federal Republic of Germany, either among the masses or the elite.⁴⁰

American-German divergences in the wake of the concept of "flexible response"⁴¹ had sometimes left the impression that the Federal Republic of Germany might have nuclear ambitions.⁴² Those divergences were most apparent during Franz Joseph Strauss' leadership of the German defence apparatus.⁴³ Strauss' lack of confidence in the American will to use nuclear weapons infused a sense of urgency into his quest for German influence on the decision to use them.⁴⁴ The Federal Republic of Germany was originally interested in exercising some degree of meaningful control over the tactical nuclear weapons stationed on its territory.⁴⁵ If Germans were worrying at all, it was about

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- 40 See Karl Deutsch, "Integration and Arms Control in the European Political Environment : A Summary Report", The American Political Science Review, Vol. LX, No. 2, June 1966, p. 363; "Arms control and European Unity : The Ten Years", Bulletin of the Atomic Scientists, Vol. XXIII, No. 5, May 1967, p. 23; and Arms Control and the Atlantic Alliance. Europe Faces Coming Policy Decisions (New York : John Wiley, 1967), pp. 15, 58 and 61. See also Richard L. Merritt and Donald J. Puchala (Eds.), Western European Perspectives on International Affairs. Public Opinion Studies and Evaluations (New York : Praeger, 1968), p. 403.
- 41 See James L. Richardson, Germany and the Atlantic Alliance. The Interaction of Strategy and Politics (Cambridge, Massachusetts : Harvard University Press, 1966), pp. 73-85.
- 42 Kissinger noticed that "once the theory of a German appetite for nuclear weapons had become established, every German proposal was interpreted to become consistent with it." Kissinger, The Troubled Partnership, p. 142.
- 43 Richardson, op.cit., pp. 75-83.
- 44 Ibid., p. 80. See also Sommer, "The Objective of Germany", p. 43.
- 45 Zedler, op.cit., p. 26: See also Hinterhoff, loc.cit., pp. 47-48 and Uwe Nerlich, "L'Allemagne et l'armement nucléaire", Stratégie, No. 5, Juil.-Sept. 1965, pp. 36 and 39.

their security and not about their nuclear status.⁴⁶

When the United States pushed ahead for the MLF after de Gaulle's press conference of January 1963, the German Government was in an extremely uncomfortable position, having signed in the same month its co-operation Treaty with France. That delicate situation was to prevail in the different phases of the MLF negotiations. Every gesture by the Federal Republic of Germany towards one of the protagonists used to evoke so many pressures by the other that a compensatory move had to be made.⁴⁷

By the end of the Summer of 1963, the German Government's position on the MLF had changed from an intelligent interest to something more closely resembling a demand.⁴⁸ It seems that the signature of the Moscow Test-Ban Treaty in August 1963, handled by both London and Washington with the minimum of consultation with Bonn, had convinced the German Government that the MLF proposal must be firmly embraced as the only modification in alliance arrangements that was available; partly to bind American military power inexorably and permanently to Europe; partly to ensure a stronger German voice in Washington; and partly to compensate for the Pentagon's declining interest in land-based European MRBM.⁴⁹

Among other reasons given by the supporters of the MLF in Germany were the following : enticing de Gaulle to give up his national nuclear force for participation in what many Germans hoped might eventually become a European nuclear force; seeing

46 Sammer, "The Objective of Germany", p. 40.

47 See Kissinger, The Troubled Partnership, pp. 207-208.

48 Buchan, "The Multilateral Force", p. 9.

49 Ibid. See also Richardson, op.cit., pp. 68-70, and Catherine M. Kelleher, "The Issue of German Nuclear Armament", Proceedings of the Academy of Political Science, Vol. XXIX, No. 2, 1968, pp. 95-96.

in it a visible expression of an American-European nuclear partnership which would give the Germans continued nuclear participation in the event of a non-proliferation treaty; using it as a bargaining point with the Soviet Union to make concessions on the question of German reunification in return for Germany dropping the MLF; seeing in the MLF a method to strengthen NATO by giving it a nuclear voice; and seeing in it a way to heal a growing Franco-German split over NATO and national nuclear forces by getting France to work actively in an organization which included German participation.⁵⁰

The political motives for the MLF were more stressed than the others. Strengthening the ties between Europe and the United States was considered primordial.⁵¹ On the other hand, the German Defence Minister, Mr. Von Hassel, had expressed the view that in order to maintain the effectiveness of the deterrence, the principle of unanimity on the release of nuclear weapons could not be maintained forever.⁵²

The political future of the three leading figures in the German Government in 1964 : Erhard, Schröder and Von Hassel, became entangled with the future of the MLF as a touchstone of Atlanticism.⁵³ By the Spring of 1964 a firm split had developed in Bonn's ruling party (CDU-CSU). On the one side were the

50 Zedler, op.cit., p. 26.

51 For examples, see Kai-Uwe von Hassel, "Detente Through Firmness", Foreign Affairs, Vol. 42, No. 2, Jan. 1964, p. 189; and "Organizing Western Defence", Foreign Affairs, Vol. 43, No. 2, Jan. 1965, p. 213. For another article stressing the importance of transatlantic links, see Theo Sommer, "For an Atlantic Future", Foreign Affairs, Vol. 43, No. 1, Oct. 1964, p. 114.

52 Assembly of Western European Union, Proceedings, 9th Sess., Part 1, II, June 1963, p. 156.

53 Buchan, "The Multilateral Force", p. 9. See also Zedler, op.cit., pp. 8-9, who explains the individual motives of each of the three leaders.

Atlantiker led by Foreign Minister Schröder, who based his foreign policy on close ties with the United States. On the other were the so-called Gaullisten led by Adenauer and Strauss who gave priority to close understanding with France although they did not share all of de Gaulle's ideas about the future of Europe.⁵⁴

The United States had vested interests in the political future of the moderate centre in the Federal Republic of Germany. Collapse of the MLF would have meant a setback to Erhard, a strengthening of the German right wing and a revival of French-German entente.⁵⁵

The study referred to earlier had shown that a MLF within the NATO system, and hence largely under American control split the German elite evenly, with only 34 per cent clearly in favour, and another 34 per cent clearly opposed. An MLF force outside NATO was definitely rejected by four-fifths of the German leaders. If a MLF under NATO should have become an accepted fact, then three-fifths of the German leaders, definitely would have wanted their own country to join it.⁵⁶

The same study had also shown the following remarkable results :

- Many respondents in Germany volunteered to comment that they were willing to support the MLF chiefly because it appeared to be desired by the United States.
- 71 per cent of the military definitely favoured the MLF.
- Part of the definite support and presumably also some of the conditional support for the MLF-NATO proposal was given on the explicit grounds

54 Kohl, French Nuclear Diplomacy, p. 288.

55 Buchan, "The Multilateral Force", p. 11.

56 Deutsch, "Arms Control and European Unity : The Ten Years", pp. 23-24. See also Sommer, "The Objectives of Germany", p. 52.

that the German leaders wanted to go along with what they considered to be an American initiative and desire.⁵⁷

(ii) The United Kingdom : The Nassau meeting had shown to what extent the United Kingdom Conservative Government was keen to preserve an independent nuclear deterrent.⁵⁸ It was basically for that reason that it was reluctant to endorse the MLF proposal. Within the Government, there were public and endemic differences of opinion between the Foreign Office and the Ministry of Defence. The former argued that the United Kingdom could not afford to stand aside from an important development in the relations between the United States and the Federal Republic of Germany,⁵⁹ while the Ministry of Defence resolutely opposed the MLF as costly, vulnerable, unnecessary, destabilizing, and likely to encourage a German appetite for nuclear weapons.⁶⁰ The consequence was an announcement by the Prime Minister on the first of October 1963 that the United Kingdom would join the discussions of the Paris working group on the MLF but without commitment.⁶¹ One of the motives for the United

57 Deutsch, Arms Control and the Atlantic Alliance. Europe faces Coming Policy Decisions, pp. 62 and 64.

58 For a basic understanding of the issue of the British independent nuclear deterrent, see Richard Rosecrance, Defence of the Realm. British Strategy in the Nuclear Epoch (New York : Columbia University Press, 1968); Groom, op. cit.; Andrew Pierre, "Britain's Defence Dilemmas", Proceedings of the Academy of Political Science, Vol. XXIX, No. 2, 1968, pp. 64-79 and "Nuclear Diplomacy : Britain, France and America", Foreign Affairs, Vol. 49, No. 2, Jan. 1971, especially pp. 288-293.

59 Harold Wilson estimated that the Foreign Office was anxious to please the US. Wilson, op.cit., p. 37.

60 Mr. Harold Watkinson, a predecessor of Mr. Thorneycroft, the UK Defence Minister, was also very critical of the idea of a mixed-manned ship which he considered to be a very strong provocation in a time of very high tension. Harold Watkinson in "Evolution of NATO", The Institute for Strategic Studies (London), Adelphi Papers, No. 5, Oct. 1963, p. 37.

61 See Buchan, "The Multilateral Force", p. 10

Kingdom considering the MLF seemed to have been to obtain a veto over the development of the idea of a "European option", to which it was very hostile.⁶²

Consequently the Conservative Government had failed to take a clear stand on the MLF. The Government throughout the MLF debate of 1963-1964 was willing to integrate the British deterrent into a NATO framework which would have allowed it a certain measure of independence and influence. A multinational approach favoured in Nassau was still dominant. It would have offered the United Kingdom the possibility of finding a less costly way of maintaining and developing her deterrent by including it in an interallied system such as the one confirmed by NATO Ministers in Ottawa in May 1963.⁶³ By virtue of her contribution the United Kingdom would have had a prominent position.⁶⁴

All that the Conservative Government was ready to concede was apparently a symbolic participation in the MLF which would have meant merely putting at the disposal of the mixed-manned

62 Kissinger, The Troubled Partnership, p. 76.

63 At the Ottawa Ministerial Meeting of the North Atlantic Council from 22 to 24 May 1963, the following steps were approved :

- a) assignment of the UK V-bomber force and three US Polaris submarines to SACEUR.
- b) establishment by SACEUR on his staff of a Deputy responsible to him for nuclear affairs.
- c) arrangements for broader participation by officers of NATO member countries in nuclear activities in Allied Command Europe and in co-ordination of operational planning at Omaha (the Headquarters of the US Strategic Air Command (SAC)).
- d) fuller information to national authorities, both political and military.

Those arrangements have been described as the Inter-Allied NATO Force (IANF). See Keessing's Contemporary Archives, Vol. XIV, 1963-1964, p. 19525 A.

64 See Fontaine, loc.cit., IVth article, 19 Nov. 1964, p. 3 and Kohl, French Nuclear Diplomacy, pp. 335-337.

fleet, shipyards and harbour installations.⁶⁵ But for a few months before the 1964 British elections, Mr. Thorneycroft submitted on July 1964 to the Paris working group on MLF a plan for a mixed-manned land force located in Europe and equipped with V-bombers, TSR-2 bombers and Pershing missiles.⁶⁶

Mr. Harold Wilson, the Labour Party leader in the Opposition, opposed the decision taken in Nassau and opposed still more the pretence that the United Kingdom had an independent nuclear deterrent.⁶⁷ For Mr. Wilson, not only could the Polaris fleet not be maintained without United States' support but also the weapons could never be used independently. He believed that the Nassau clause on British freedom of action in a case where supreme national interests were at stake was a fictitious assertion of independent nuclear action. "This clause had never been taken seriously in the United States or in Britain."⁶⁸

Labour leaders also expressed precise objections to the MLF proposal. Its main weakness was the question of confusing the physical possession of nuclear weapons with their control. Supporters of the MLF in Europe were considered to be backing it with the hope of alleviating the United States veto and as

65 Fontaine, loc.cit., IVth article, 19 Nov. 1964, p. 3.

66 See Neville Brown, A New Policy for NATO ?, p. 425 and Hinterhoff, loc.cit., p. 54.

67 Wilson, op.cit., p. 40. Mr. Wilson refers to the experience of the Blue streak, a liquid-fueled missile, that the UK had failed to develop.

68 Ibid., pp. 54-55. Two other leaders of the Labour Party, Gordon Walker, who was to become the first Foreign Minister in the Labour Government of October 1964, and Frederick Mulley, who was to become Minister of State for Disarmament, had expressed similar views and recognized the need to surrender Britain's claim to be an independent Power. P.C. Gordon Walker, "The Labour Party's Defence and Foreign Policy", Foreign Affairs, Vol. 42, No. 3, Apr. 1964, pp. 393-394 and Frederick W. Mulley, "NATO's Nuclear Problems : Control or Consultation", The Atlantic Community Quarterly, Vol. 2, No. 3, Fall 1964, p. 463.

a way to a European nuclear force, thus leading to the proliferation of nuclear weapons and the division of the Alliance.⁶⁹ It was thought unwise to launch an elaborate plan for a weapon of little importance in order to secure only a short-term solution to the German problem. It would simply divert European efforts and resources from conventional forces to a nuclear weapon that would add nothing to the reality of Europe's defences and the strength of the West.⁷⁰

Mr. Grimond, the leader of the Liberal Party, and George Brown, who was to become a Labour Foreign Minister, as well as other political leaders, feared that Ambassador Merchant's Mission to the Federal Republic of Germany in early 1963 was having the effect of generating a demand for nuclear weapons where none existed before. They thought that if such a demand ever came into being it was not likely to be satisfied by the secondary symbolism of mixed-manning.⁷¹

During the British election campaign at the end of 1964, the British independent deterrent was the principal foreign and defence issue between the two main political parties. The new Labour Government had found, however, that it was not that easy to give up the independent nuclear deterrent. As Mr. Wilson explained in his memoirs :

"It was clear that the production of the [Polaris] submarines was well past the point of no return; there could be no question of cancelling them, except at inordinate cost. We decided to go ahead with four of the projected five submarines, and to ensure their deployment as a full committed part of the NATO defence forces. There was to be no nuclear pretence or suggestion of a go-it-alone British nuclear war against the Soviet Union."⁷²

69 See Ibid., pp. 454-462.

70 Walker, loc.cit., p. 394.

71 A. Schlesinger, op.cit., pp. 745-746.

72 Wilson, op.cit., p. 40.

After his election (by a minuscule majority), Wilson seemed to have taken into account Conservative sentiment for retaining British nuclear capability, and a widespread British reluctance to let the Germans anywhere near atomic weapons.⁷³ It was also recognized that the configuration of the problem of nuclear spread had altered since the time when it could be argued that Britain, by voluntarily renouncing her nuclear arms, could strongly influence other countries to desist from acquiring them. Nuclear proliferation in Asia and the Middle East seemed on the horizon. In addition, little enthusiasm could be aroused in London for an act of self-abnegation which would leave France as the only European nuclear Power. Moreover, the nuclear force was seen as an important bargaining asset and an instrument of diplomacy. Its existence ensured that special regard was given to Britain's point of view on such matters as the Multilateral Nuclear Force, NATO strategy and the non-proliferation treaty. The nuclear force would give Britain a decisive role in shaping a future European deterrent or any other European nuclear arrangement. Labour ministers responsible for handling foreign relations acknowledged that somehow it intangibly enhanced Britain's influence.⁷⁴

In such circumstances, the Labour Government came up with the ANF proposal, the discussion of which will be deferred to a following section.

(iii) France : The immediate negative reaction of President de Gaulle to the Nassau meeting and the MLF was not surprising. First, de Gaulle's stand in January 1963 was in conformity with his drive for establishing an independent French deterrent not amenable to any foreign influence. The "counter force" doctrine which was very critical of independent national deterrents as

73 Geyelin, op.cit., p. 166.

74 Pierre, "Britain's Defence Dilemmas", pp. 74-75.

well as the Anglo-American special relationship in the field of nuclear weaponry, as further confirmed in Nassau, had contributed in cementing the French position. In the second place, the persistence of the United States Administration to go ahead with the MLF and the favourable German attitude to it had led France to be more intransigent in its stand.

The French strategic doctrine need not be exposed within the limits of this study. After all, the French position on the MLF is demonstrative of several facets of that doctrine.⁷⁵ However, the basic theme of the doctrine is that nuclear weapons have made alliances obsolete. Faced with the risk of total destruction, no country will jeopardize its survival for another. Hence, each country must have its own nuclear arsenal to defend itself against direct attack.⁷⁶

The unfavourable position of the French Government which had developed in relation to the MLF in the course of the two years that followed the Nassau meeting can be explained as follows :⁷⁷

First, the objective of integrating the existing national nuclear forces to place them, through the MLF, under collective

75 For a basic understanding of the French strategic doctrine, see Pierre Gallois, La Stratégie de l'âge nucléaire (Paris : Calmann-Lévy, 1960), especially chapter 4 and Paradoxes de la paix (Paris : Presses du Temps Présent, 1967), pp. 129-147; and Charles de Gaulle, Mémoires d'espoirs. Le renouveau 1958-1962 (Paris : Plon, 1970), pp. 211-282. See also the major works of Wolf Mendl, Deterrence and Persuasion. French Nuclear Armament in the Context of National Policy, 1945-1969 (London : Faber and Faber, 1970) and Kohl, French Nuclear Diplomacy, op.cit.

76 For a critic of the French doctrine, see Kissinger, The Troubled Partnership, chapter 2, pp. 31-64.

77 For a succinct exposition, see Jacques Vernant, "Washington, Londres, Paris et la 'MLF'", Revue de Défense Nationale, 20e Année, Déc. 1964, p. 1987.

control, is impossible to achieve as long as national and sovereign States exist. The MLF had offered only illusory possibilities of any real sharing of nuclear responsibilities.⁷⁸ The force would have remained wholly under American authority in all matters of control and decision.⁷⁹

From the military point of view the MLF was considered to have no value. Due to its vulnerability as well as to the American veto on its use, the force would have contributed nothing to the European security. General Paul Stehlin, the Chief of Staff of the French Air Force in 1963, had even considered that the MLF would, in a sense, have resulted in the denuclearization of Europe just as much as the Rapacki Plan; and with an ill will could be regarded as an American contribution to the Soviet endeavour to maintain the bipolar structure of the present day world, the pole opposed to the Soviet Union being not the West as a whole, but the United States alone.⁸⁰

It was feared that the MLF being short of satisfying German demands for equality might whet German appetite for nuclear weapons. The thrust of French anti-MLF was directed against the Federal Republic of Germany⁸¹ in order to force it to align with France in the context of the Franco-German Treaty of January 1963. As an alternative to German participation in the MLF, de Gaulle had offered the Federal Republic of Germany the protection of the force de frappe,⁸² and had, during his visit to Bonn in July 1964, warned for the first time against the consequences of an eventual German participation in the MLF on

78 Beaufre, "The Sharing of Nuclear Responsibilities. A Problem in Need of Solution", p. 413.

79 General Paul Stehlin, "The Evolution of Western Defence", Foreign Affairs, Vol. 42, No. 1, Oct. 1963, p. 77.

80 Ibid., p. 76.

81 Kohl, French Nuclear Diplomacy, p. 242.

82 Ibid., pp. 287-288.

the Franco-German Treaty. German participation was considered to have no other effect but to consolidate the American grip over Europe and ruin the chances of the continent's independence. As Erhard's response was negative, Franco-German relations deteriorated.⁸³

Later on, the French Prime Minister, Mr. Georges Pompidou, in his declarations to the "Associations des journalistes parlementaires" on 5 November 1964, had also underlined the incompatibility of German participation in the MLF with the Franco-German Treaty.⁸⁴ French denunciation of that Treaty was supposedly the price the Federal Republic of Germany would have paid if it had participated in the MLF.⁸⁵

Moreover, there was the difficulty of convincing the Soviet Union and its allies that the MLF was essentially designed to reinforce the control over the Federal Republic of Germany, while at the same time assuring the latter that the force would grant it equality.⁸⁶

Lastly, the MLF was considered to block the evolution towards an independent European political and military organization. In de Gaulle's views Europe should concert its own policy and then deal with the United States as a unit. The force would have made Europe completely dependent on the United States,⁸⁷ thereby excluding any hope that a real European force might eventually be established.⁸⁸ In his aforementioned declarations, Mr. Pompidou said that :

83 Fontaine, loc.cit., IVth article, 19 Nov. 1964, p. 3.

84 Le Monde, 7 Nov. 1964, p. 2.

85 At least that was what de Gaulle told US Ambassador Charles Bohlen in Paris in December 1964. Kohl, French Nuclear Diplomacy, p. 296.

86 See Soviet position later.

87 Kissinger, The Troubled Partnership, p. 51.

88 Beaufre, "The Sharing of Nuclear Responsibilities. A Problem in Need of Solution", p. 413.

"nous pouvons nous demander si une ... telle force multilatérale n'est pas destructrice pour l'Europe, provocatrice pour certains autres pays et finalement dirigée plus ou moins contre la France."⁸⁹

In France, since 1962, a series of hints began about French interest in an eventual European nuclear deterrent which would use the French force as a nucleus or what was to be called the Europeanization of the force de frappe.⁹⁰

The two other major European countries in Europe, West Germany and the United Kingdom, were opposed to the idea of a separate European force not in close conjunction with the United States. For Mr. Von Hassel, the basis of a European force would be a politically united Europe and even then the European nuclear force should play an active part in the nuclear weapons systems of the Atlantic community.⁹¹ By the Spring of 1965 the Federal Republic of Germany rejected French overtures.⁹² Mr. Harold Wilson, in November 1964, did not conceal his hostility to the idea of a European force. In his view, it would divide NATO, prompt the United States to reappraise its attitude towards Europe and be a grave step towards the proliferation of nuclear weapons.⁹³

It remains to be said that the MLF had seemed to unite Gaullists and the opposition in refuting it.⁹⁴ In the study referred to earlier in connexion with the German position, it was found that there was overwhelming and deep rooted French hostility to any idea of a German national nuclear weapon, or

89 Le Monde, 7 Nov. 1964, p. 2.

90 Kohl, French Nuclear Diplomacy, pp. 282-286.

91 Von Hassel, "Organizing Western Defence", p. 214.

92 Kohl, French Nuclear Diplomacy, p. 298.

93 Ibid., pp. 338-339.

94 Ibid., pp. 239-240.

to a substantial German share in a multilateral nuclear weapons system.⁹⁵

(iv) The Other NATO Allies : The first reaction in Europe to the MLF proposal as presented to the Allies in March 1963 seems to have been civil but not enthusiastic.⁹⁶ The smaller governments which were approached were worried about the cost of even a small share in such a force, especially if they were also to accede to American demands to strengthen their conventional forces. Naval staffs were sceptical about the operational viability of such a fleet and public opinion was also sceptical or disinterested.⁹⁷ Only eight NATO countries participated in the Paris working group. Their participation, however, was without further commitment. As previously mentioned, they were Belgium, West Germany, Greece, the United Kingdom, Italy, the Netherlands, Turkey and the United States. The other seven non-participants were Canada, Denmark, France, Iceland, Luxembourg, Norway and Portugal.

As to the participants in the working group other than West Germany, the United Kingdom and the United States, Belgium's and the Netherlands' positions were very near to that of the Conservative Government in the United Kingdom. The fear of too great an influence being acquired by Germany had, to a great extent, determined their attitude.⁹⁸ Belgium's position was particularly timid because of the elevated cost of the project.⁹⁹ It was the only country out of the seven which, for financial

95 Deutsch, Arms Control and the Atlantic Alliance. Europe Faces Coming Policy Decisions, p. 15 and "Arms Control and European Unity : The Ten Years", pp. 23-24.

96 Buchan, "The Multilateral Force", p. 8.

97 Ibid.

98 Eyraud, "La force multilatérale", pp. 114-115.

99 See Général Baron Del Marmol, "Opinions Belges sur le 'détarrent' nucléaire Européen", Chronique de politique étrangère, Vol. XVII, No. 6, Nov. 1964, pp. 772-773.

reasons, did not take part in the mixed-manned experimental ship. Fear that the MLF would drive a wedge between the West European and the Scandinavian members of NATO was one of the principal reasons for the hesitation of the Netherlands in supporting the project.¹⁰⁰

The Greeks and the Turks could also not financially afford the MLF.¹⁰¹ Their participation in the Paris group seems to have been merely symbolic.¹⁰²

Italy endorsed the concept in 1963. The Italian elections that year avoided the issue.¹⁰³ In general, Italy was quite favourable to the project which would have allowed it an important position in the defence of the West.¹⁰⁴

As to the non-participants in the Paris group other than France, Canada had affirmed that it could not afford to finance simultaneously the MLF, the Canadian participation in the North American Defence Organization (NORAD) and a well-equipped Canadian conventional force. The Government of Mr. Lester Pearson had definitely opted for the latter two.¹⁰⁵

100 Buchan, "The Multilateral Force", p. 15.

101 Sorensen, op.cit., p. 568.

102 Eyraud, "La force multilatérale", p. 115.

103 Sorensen, op.cit., p. 568.

104 Eyraud, "La force multilatérale", p. 114. See also Kohl, French Nuclear Diplomacy, p. 239 and Don Cook, "The Art of Non-Proliferation", Encounter, Vol. XXVII, No. 1, July 1966, p. 5.

105 Eyraud, "La force multilatérale", p. 115. See also Sherman, Nuclear Proliferation, p. 82. Sherman reports that many Canadians considered the sacrifice of the MLF a reasonable price for a Soviet signature of the NPT, and had little patience with a Canadian Government that failed to attack the supposed stubbornness of the American negotiators.

Denmark, Norway and Iceland were basically hostile to nuclear weapons. Iceland does not even have any armed forces.¹⁰⁶ Luxembourg has a rather small army. As to Portugal, its military engagement in its colonies and lack of funds prevented it from participation.¹⁰⁷

Before concluding this part on the position of the NATO allies, it is to be noted that in the controversy which had taken place between the United States and the Soviet Union on the MLF in the disarmament forums, the countries non-participants of the Paris group, with the exception of Canada, had either abstained from taking a position or made general statements alluding to the desirability to reach soon a non-proliferation treaty. Canada, by virtue of its participation in the ENDC, could not avoid giving its views on the issue. It considered the arrangements under discussion to be consistent with the terms of the "Irish Resolution". It even explained the reason why the idea of the MLF had developed in NATO and that it was designed as an alternative to the possible proliferation of national possession of nuclear weapons.¹⁰⁸

As to the participants in the Paris group, the other two NATO participating members of the ENDC, Italy and the United Kingdom, had stressed, along with the United States, the non-proliferation aspect of the MLF.¹⁰⁹ The British Foreign Minister, Mr. Butler, had emphasized that a non-proliferation agreement would in itself constitute a safeguard against a multi-

106 J.L. Coffey, "Strategy, Alliance Policy and Nuclear Proliferation", Orbis, Vol. XI, No. 4, Winter 1968, p. 977 and Eyraud, "La force multilatérale", p. 115.

107 Ibid., p. 115.

108 ENDC/PV. 201, 23 July 1964, p. 27 and ENDC/PV. 203, 30 July 1964, p. 39.

109 ENDC/PV. 195, 2 July 1964, pp. 43-44 and ENDC/PV. 207, 13 Aug. 1964, p. 13 (Italy); and ENDC/PV. 195, 2 July 1964, pp. 17-18 and 42-43 and ENDC/PV. 201, 23 July 1964, pp. 23-27 (United Kingdom).

lateral nuclear force which involved proliferation of nuclear weapons.¹¹⁰ The Dutch representative at the 1965 session of the Disarmament Commission had also expressed similar views.¹¹¹ The Greek representative at the same session acquiesced with the assurances given by the United States on the MLF.¹¹²

(b) The Soviet Union and the Warsaw Pact Members

In the Irish era of 1958-1961 when the non-proliferation concept was being formulated, the Soviet Union and some Eastern European countries expressed their fears of a German drive for nuclear weapons. The Federal Republic of Germany was described as "a breeding place of militarism and revanchism." This sort of fear was accentuated by the MLF proposal. The attack on the MLF escalated as developments towards a possible materialization of the scheme manifested themselves. The attacks continued even when it was obvious that the scheme was losing ground before less ambitious proposals. However, these latter attacks had actually originated from United States non-proliferation treaty drafts which left the possibility open for such schemes to emerge in the future. The attacks were more of a general nature at the beginning, but as the MLF negotiations progressed and more details were known about its components and potential operation, they became more detailed and concrete.

In the period from 1963 to the beginning of 1965 when the MLF discussions were at their peak, the ENDC and the Disarmament Commission in particular served as arenas for a NATO/Warsaw debate on the issue and consequently as useful indicators of the position of the Soviet Union and its allies and counter United States arguments in defence of the scheme.

110 ENDC/PV. 169, 25 Feb. 1964, p. 11.

111 DCOR, 83rd mtg, 18 May 1965, para. 57.

112 Ibid., 93rd mtg, 7 June 1965, para. 42.

The arguments resorted to by the Soviet Union and its Eastern European allies to discredit the MLF can be summarised as follows :

The basic theme of the campaign was that the MLF would mean the proliferation of nuclear weapons and in particular the access to these weapons by the Federal Republic of Germany as a step towards possessing its own nuclear weapons. It was feared that Germany's access to the weapons would encourage the desire of the revenge-seeking forces there to alter the situation which took shape in Europe after the Second World War, and to pursue their territorial claims against the German Democratic Republic (GDR) and other States.¹¹³

Suspicion of the Federal Republic of Germany's intentions was very noticeable in the Soviet position. The FRG's manifest interest and active support of the MLF was interpreted to mean nuclear ambitions.¹¹⁴ It was feared that concessions on the MLF would lead to other concessions which would be detrimental to the world as past recent history had demonstrated.¹¹⁵ The history of the two World Wars was repeatedly invoked to warn

113 See the communiqué issued by the Political Consultative Committee of the Warsaw Treaty Organisation meeting in Warsaw on 19-20 January 1965, in Keessing's Contemporary Archives, Vol. XV, 1965-1966, p. 20589 A. See also "Note of the Soviet Government to the Government of the United States" dated 8 Apr. 1963 circulated later to the ENDC as Doc. ENDC/84, 17 Apr. 1963, p. 2. (The Note was distributed to all NATO countries except Portugal).

114 See particularly the note of the Soviet Government to the Government of the FRG dated 11 July 1964 in ENDC/137, 15 July 1964, pp. 5-7.

115 ENDC/84, 17 Apr. 1963, pp. 7-10 and the note addressed by the Soviet Government to the Government of the US on 11 July 1964 in ENDC/137, 15 July 1964, p. 2. See also N. Talensky, "A NATO Nuclear Force is a Dangerous Venture", International Affairs (Moscow), No. 5, May 1963, p. 24.

against too much confidence in future German behaviour.¹¹⁶ Germany was considered to regard nuclear weapons, first as a symbol of sovereignty and equality in international affairs; second, as a means of political blackmail and diplomatic bargaining; and third, as weapons of war.¹¹⁷ The Soviet Union also considered the non-proliferation argument for the MLF as reconciling things which were clearly irreconcilable.¹¹⁸

The MLF was looked upon as increasing to a great extent the danger of a thermo-nuclear conflict. It was considered impossible to invent some "intermediate" approach without starting a chain reaction with all the dangerous consequences deriving from it.¹¹⁹ The danger of accidental war was stressed.¹²⁰ The MLF as an instrument of aggression was viewed as a reflection of NATO's aggressiveness.¹²¹

The Soviets were very doubtful of the validity of American retention of its veto on the use of the Force. It was impossible for them to believe that the Federal Republic of Germany wanted to join the MLF simply to have a finger on the safety

116 For Soviet statements, see, for example, DCOR, Suppl. for Jan. to Dec. 1964, pp. 14-18, Doc. DC/209, Ann. 1, Sec. E (ENDC/123, 28, Jan. 1964) and ibid., 72nd mtg, 26 Apr. 1965, para. 106. See also ENDC/PV. 195, 2 July 1964, pp. 24 and 26 (Poland) as well as Talensky, loc.cit., p. 25 and A. Yeremenko, "Absurd Plans, Ridiculous Hopes", International Affairs (Moscow), No. 6, June 1963, p. 17.

117 Y. Novoseltsev, "Bonn's Excessive Ambitions", International Affairs (Moscow), No. 2, Feb. 1966, p. 33. See also the article by N. Andreyev, "Revanchism and the Atomic Bomb", International Affairs (Moscow), No. 11, Nov. 1966, pp. 74-78, which is a vivid example of Soviet worries of German nuclear ambitions.

118 ENDC/137, 15 July 1964, p. 3.

119 See ENDC/84, 17 Apr. 1963, pp. 2, 4-5.

120 Talensky, loc.cit., pp. 24-25.

121 Ibid., p. 23.

catch. Germans having obtained at first a somewhat restricted access to nuclear weapons in the MLF, would try, it was argued, to secure abolition of most of the restrictions one by one, just as it had secured the abolition of most of the restrictions laid down for the Federal Republic of Germany in the Paris agreement of 1954 in the sphere of conventional armaments.¹²² Electronic devices to prevent unauthorized use of the weapons were considered easily removable.¹²³

Moreover, the Soviet Union objected to the idea of surface ships carrying nuclear missiles, on the ground that they might be disguised as peaceful mercantile vessels. It invoked The Hague "Convention Relative to the Conversion of Merchant Ships Into Warships", signed on 18 October 1907, forbidding, even in wartime, the secret arming of merchant ships, thereby converting them into warships.¹²⁴

The MLF was also considered contrary to the letter and spirit of the "Irish Resolution" which prohibited non-nuclear States from manufacturing nuclear weapons or "to otherwise acquire control of such weapons".¹²⁵

It was feared that the MLF would lead to the creation of a European nuclear force which would be under the aegis of the Federal Republic of Germany.¹²⁶

It was also feared that the MLF would lead to an intensification of imperialist and neo-colonialist pressure on the peoples who obtained their independence or were struggling for it.¹²⁷

122 ENDC/PV. 195, 2 July 1964, pp. 9-10 and 13.

123 Talensky, loc.cit., p. 26.

124 ENDC/84, 17 Apr. 1963, p. 6. For the text of The Hague Convention, see British and Foreign State Papers, Vol. C (1906-1907) (London : HMSO, 1911), pp. 377-389.

125 ENDC/PV. 195, 2 July 1964, p. 39 (USSR).

126 ENDC/137, 15 July 1964, p. 2.

127 DCOR, 72nd mtg, 26 Apr. 1965, para. 106 (USSR).

The scheme was finally found incompatible with disarmament and the establishment of denuclearized zones.¹²⁸

The Soviet Union and its allies, in a communiqué issued by the Political Consultative Committee of the Warsaw Treaty Organization meeting in Warsaw on 19-20 January 1965, threatened that if MLF plans were implemented they "would be forced to carry out the necessary defence measures in order to ensure their security..."¹²⁹

As a counter measure to the MLF, Albania, which did not attend the meeting, proposed, in a note to Poland published on 2 February 1965, that the Warsaw Pact should formally declare that all the Socialist countries should be equipped with nuclear weapons.¹³⁰

History was a driving force for Soviet opposition, not only as far as recent experiences with Germany in both World Wars I and II, but also as far as Russian history itself, which was dominated by constant fear of foreign intervention.¹³¹ Soviet fear from a German finger on the nuclear trigger, if seen in this context, could be very well considered as genuine. Those who talked to Soviet officials closely and privately derived the impression that the Soviet opposition was not ritualistic and was based on a fear that important technical information

128 Ibid., para. 112 (USSR). The Moscow Test-Ban Treaty was connected with a Soviet calculation that it would lead to the abandonment of the MLF. Zbigniew Brzezinski, "Moscow and the MLF : Hostility and Ambivalence", Foreign Affairs, Vol. 43, No. 1, Oct. 1964, p. 130.

129 See Keessing's Contemporary Archives, Vol. XV, 1965-1966, p. 20589 A.

130 Ibid. See also Albania's attack on MLF and German militarism and revanchism in DCOR, 78th mtg, 11 May 1965, para. 82.

131 For an excellent analysis of Moscow's behaviour as a reflection of Russia's historic experience, see Louis J. Halle, The Cold War as History (London : Chatto and Windus, 1967), chapter II, pp. 10-19.

on warheads and missile systems would pass gradually into German hands and broaden the option of a future nationalistic German Government, either to develop a national nuclear force or for some co-operation ventures with France.¹³² In fact, Germany's European allies were as worried as the Soviets about German participation in the MLF.

It should be borne in mind that the Soviets had been for a long time hostile to European Unity as a political objective to be pursued and attained by the European Economic Community. Any measures aimed at such an objective were unwelcome. As one of the objectives to be pursued by the MLF was European unity, Soviet opposition was therefore inevitable. The Soviets' continued attacks on the MLF even in the period when it was obvious to them that the NATO allies were divided could be interpreted as having the objective of widening further allies' divergences.¹³³ The Soviets might not have hoped to destroy NATO as an organization, but its weakening had apparently been forecasted.¹³⁴

However, the MLF offered the opportunity to the new Soviet leadership, after the fall of Khrushchev in 1964, to reassert the importance of the Warsaw Pact and to argue that the political situation necessitated its strengthening.¹³⁵ The seventh meeting of the Consultative Committee of the Warsaw Treaty

132 Buchan, "The Multilateral Force", p. 14. One writer had argued, on the contrary, that those consequences could be the result of a MLF defeat. Brzezinski, loc.cit., p. 127.

133 On Soviet stimulation of opposition to the MLF in Western Europe, see Ibid., pp. 125-130.

134 The US had interpreted Soviet attacks on the MLF and Germany as mainly designed to disrupt, divide and weaken the NATO Alliance. See Hearings on Nonproliferation, 1966, p. 5 (Secretary of State Dean Rusk) and pp. 36 and 42 (William Foster).

135 Korbonski, loc.cit., p. 45.

Organization had actually concentrated on the MLF.¹³⁶ The MLF could have embarrassed the Soviet Union. Its allies could have asked for an equal role as their counterparts in NATO. However it seems doubtful that the Soviets would have taken the risk in sharing their know-how with their allies.¹³⁷

Fears of escalation and accidental war as a result of a MLF were a reflection of Soviet mounting appreciation of the dangers inherent in a general nuclear war. Since the 20th Communist Party Congress in 1956, a reinterpretation of Leninist views on the inevitability of war, and on the role of war in extending communism had taken place. War was no longer regarded as inevitable, and deterrence of war became primordial.¹³⁸

In the face of increasing Soviet opposition, the United States had taken the lead in defending the MLF and in demonstrating its usefulness. In the first place, the need for the force was stressed as a device to enable members of NATO to cope with a range of threats which they might face. "(S)o long as hundreds of Soviet nuclear-tipped rockets are arrayed against Europe, effective European participation in strategic deterrence should be provided."¹³⁹ Strengthening NATO and the political ties which bound together the nations of the Alliance was cited as one of the principal objectives of the force.¹⁴⁰

136 Keessing's Contemporary Archives, Vol. XV, 1965-1966, p. 20589 A.

137 Brzezinski, loc.cit., p. 130.

138 For a basic understanding of the Soviet doctrine on military strategy, see Marshal V.D. Sokolovsky (Ed.), Military Strategy. Soviet Doctrine and Concepts (London and Dunmaw : Pall Mall Press, 1963). See also William Kintner and Harriet Fast Scott (Eds.), The Nuclear Revolution in Soviet Military Affairs (Norman, Oklahoma : University of Oklahoma Press, 1968) and Bowie, "Strategy and the Atlantic Alliance", pp. 712-715.

139 ENDC/PV. 195, 2 July 1964, p. 37.

140 See United States' reply to the Soviet Union note on MLF, dated 28 Aug. 1964 in ENDC/142, 10 Sept. 1964, pp. 1-2.

The MLF was defended by the United States as a non-proliferation measure. By offering an alternative to national nuclear weapons' programmes, it would increase incentives and improve chances for the limitations of national weapon-producing centres.¹⁴¹ The Soviet Union was reminded that the People's Republic of China was the only country to have embarked on a nuclear weapons programme with the help of a nuclear Power.¹⁴²

The Federal Republic of Germany was defended. For the United States, tensions in Europe emanated from the unnatural division of Germany and the refusal of the Soviets to agree to grant the German people their inherent right of self-determination.¹⁴³ The Federal Republic of Germany's renunciation of nuclear weapons was repeatedly referred to.¹⁴⁴

As to the control of the force, it was explained that no single participant would be able to fire the missiles, since firing the missiles in wartime would be by decision of the American President and an agreed number of other participants. Moreover, no participant would be able to withdraw any element of the force and to place it under its national control.¹⁴⁵ The force would have been subject to safeguards to prevent its use in an accidental or unauthorized manner.¹⁴⁶

It was also pointed out that surface ships would not be disguised as merchant ships. Those ships would be warships in

141 See United States' note to the Soviet Union on the MLF, dated 18 May 1963 in ENDC/90, 24 May 1963, p. 3. See also ENDC/PV. 195, 2 July 1964, p. 37 and ENDC/142, 10 Sept. 1964, p. 1.

142 Statement by Ambassador Stevenson in the Disarmament Commission on 26 Apr. 1965 in Documents on Disarmament, 1965, p. 64.

143 ENDC/90, 24 May 1963, pp. 3-4.

144 For example, see Documents on Disarmament, 1965, p. 64.

145 ENDC/PV. 195, 2 July 1964, p. 37.

146 ENDC/142, 10 Sept. 1964, pp. 1-2.

law and in fact clearly identified as part of the Western defensive armoury.¹⁴⁷

(c) The Non-Aligned Members of the ENDC

The non-aligned members of the ENDC were caught up in the controversy over the MLF which was taking place at the Conference. The problem of nuclear sharing within NATO seemed to them to unjustly dominate the debate on non-proliferation. Nothing could have better expressed their feelings than the following statement made by the Nigerian representative in the First Committee of the United Nations' General Assembly at its 20th session :

"... it would be wrong to approach the problem of proliferation from the sole angle of preoccupation with the maintenance of the status quo in Central Europe."¹⁴⁸

At the ENDC, the non-aligned members were, at the beginning, shying away from indulging in the discussion of a problem which seemed to them so thorny. In 1964, at the peak of the MLF discussions among NATO members and in the debates at the ENDC between the two camps facing each other in Europe, the individual positions of the eight non-aligned members ranged from complete silence on the issue as was the case with Brazil, Burma, Ethiopia and Sweden to various views expressed by the other four members reflecting a certain trend of uneasiness with respect to the MLF and an apparent caution so as not to appear to be taking sides.¹⁴⁹

147 ENDC/90, 24 May 1963, p. 3.

148 GAOR, 20th Sess., 1st Cttee, 1356th mtg, 19 Oct. 1965, para. 18.

149 See "Memoranda by the delegations of Brazil, Burma, Ethiopia, India, Mexico, Nigeria, Sweden and the United Arab Republic containing brief résumés of the suggestions and proposals on disarmament and collateral measures made by each delegation that were discussed during 1964". DCOR, Suppl. for Jan. to Dec. 1964, Doc. DC/209, Ann. 1, Sec. N

The Soviet representative at the 1965 session of the Disarmament Commission had interpreted these non-aligned views as strongly opposed to the MLF,¹⁵⁰ an interpretation which was neither contested by the aforementioned four non-aligned delegations nor by others.

3. The MLF : Final Analysis

In the course of this Chapter, the merits and demerits of the MLF were demonstrated. It is our purpose here to concretize them in the light of the objectives which were set for the MLF.

(a) The Non-Proliferation Argument

It was thought that by bringing the United Kingdom and France's nuclear forces into the MLF where the Federal Republic of Germany would have a role to play, it would discourage the latter's nuclear ambitions for an independent deterrent. There could have been a certain merit in such an objective but the United Kingdom and France did not accept to integrate even a part of their nuclear forces in the MLF. Secondly, German nuclear ambitions were misinterpreted. To use the words of one writer, there was a misreading of German aspirations.¹⁵¹ What the Germans wanted originally was not a newly constituted strategic force but a meaningful role for the tactical nuclear weapons paralysed by the "counter force" strategy and a role for Germany to play in planning the use of those weapons placed on its territory. The Germans had only become interested in the MLF when the United States had fervently pushed it ahead.

The Soviet Union and its allies were not alone in expressing their fears of a German finger on the trigger. Allies of

(ENDC/144, 14 Sept. 1964). See especially p. 37, para. e(ii) (India); p. 39, IV(D) (Mexico); p. 41, II(a) (Nigeria); and p. 47, item 2 B(2) (United Arab Republic).

150 DCOR, 87th mtg, 24 May 1965, paras. 64-65.

151 Zedler, op.cit.

Germany had expressed similar fears. Prominent American experts who expressed their concern about the proliferation aspect of the MLF considered that the scheme so conceived could prove in the long run inadequate to meet long-term aspirations of the allies in a meaningful role in the nuclear strategy of the Alliance. Either pressure would be exerted to alleviate or attenuate the United States veto on the use of the force, or, if that proved unsuccessful, they would proceed to develop independently their own nuclear weapons with the added stimulus and know-how provided by the MLF. The MLF was considered to be the easiest way to get the Federal Republic of Germany into the nuclear business.¹⁵²

(b) The European Unity Argument

By bringing the United Kingdom into the MLF it was hoped that United States preferential treatment of the former would be minimised, thus paving the road to European unity. The MLF was seen by one of its fervent supporters, former Under-Secretary of State George Ball, not as a final proposal but rather as a pragmatic step until a transatlantic or a strictly European nuclear force could provide an educational opportunity for preparing non-nuclear countries of Europe for the nuclear responsibilities of a common Europe.¹⁵³

However, the Polaris offer in Nassau to the United Kingdom without previously conferring seriously with France had the effect of confirming to France the special Anglo-American relationship and thus deepening the rift between France and the two allies to the extent of vetoing British entry into the Common Market. Nassau in itself might not have been the principle cause but it had certainly contributed to the French veto.

152 For example, see Kissinger, The Troubled Partnership, pp. 146, 148, 154, 164-170 and John Silard, "The Multilateral Force. The Case Against", Bulletin of the Atomic Scientists, Vol. XX, No. 7, Sept. 1964, p. 18.

153 Ball, The Discipline of Power. Essentials of Modern World Structure, pp. 205-206.

For the opponents of the MLF, such as Mr. Kissinger, the scheme would have had the practical consequence of preventing the emergence of a European point of view on nuclear matters. As Mr. Kissinger explained, the American attitude had inhibited a European quest for autonomy. It had even caused some advocates of European identity in the defence field to give their case an anti-American cast.¹⁵⁴ For Mr. Kissinger, as well as others, European political unity must precede nuclear integration and not vice-versa.¹⁵⁵ It was pointed out that a European deterrent presupposes a European Federation and more specially, a European President able to act in any crisis with unquestioned authority.¹⁵⁶

(c) The Sharing of Control Argument

The United States had sought to meet the charges of American monopoly of the nuclear strategy of the Alliance by conferring to the European allies, through their participation in the MLF, a share in the control of the nuclear armaments. In return, force expenses would have been shared collectively and would have allowed a reduction of American defence spending in Europe.

The significant point in all the negotiations that had taken place on the MLF is that control, the key issue, had not received the attention it deserved. Attention was rather focused on the mixed-manned element. Moreover, the United States in its various proposals on nuclear sharing had always retained its veto on the use of the nuclear weapons, thus United States monopoly would remain intact. The so-called "European option" was a far-fetched eventuality. United States' renunciation of its veto in favour of the formation of a European force was not

154 Kissinger, The Troubled Partnership, p. 241.

155 Ibid., p. 173; Mulley, loc.cit., pp. 461-462; and Sommer, "For an Atlantic Future", p. 116.

156 Ibid.

taken very seriously by State Department policy planners, although they frequently stressed it in conversations with the Germans.¹⁵⁷ There was no American official support for a European deterrent that could be only co-ordinated with the American deterrent.¹⁵⁸

Avoidance of the control issue was due to the intricate problems it would have raised. First of all, in the United States, the McMahon Act would have had to be further amended to allow for the co-ownership of the force. It would have been rather difficult to convince the American Congress that American nuclear weapons could be shared with others and even more difficult if not impossible to grant its approval for a "European option". At the beginning, the MLF seemed to have been kept away from the Congress, but at the end of 1964 soundings on Capitol Hill had shown that the Congress did not accept the MLF. Opposition came both from liberals who disliked the idea of giving the Germans even a pinch of nuclear power, fearing this would blight disarmament proposals, and from conservatives who wanted to cling to the American nuclear monopoly.¹⁵⁹

It could have been psychologically undesirable to codify a de jure control rule recognizing a US veto on the use of the force.¹⁶⁰ It could have raised difficulties in the Alliance

157 Kohl, French Nuclear Diplomacy, p. 241.

158 Alastair Buchan and Philip Windsor, "The Control of Western Strategy", The Institute for Strategic Studies (London), Adelphi Papers, No. 3, Apr. 1963, pp. 12-13.

159 Geyelin, op.cit., pp. 169-170. The majority of members of the Joint Committee on Atomic Energy were reluctant to accept the MLF, not because it constituted proliferation, but just in opposition to the concept. Senator Pastore in Hearings on Nonproliferation, 1966, p. 43.

160 See Sir John Slessor, "Command and Control of Allied Nuclear Forces. A British View", The Institute for Strategic Studies (London), Adelphi Papers, No. 22, Aug. 1965, p. 5.

which is a coalition of sovereign States. If, on the other hand, a majority rule were codified, dissenters would have possibly not respected the decision of the majority.

As sheer survival was at stake, the dilemma was that while every participant might regard its veto right as a condition of participation in the MLF, Europeans wanted to be sure that the United States would intervene if they so desired. In the long run, it was because of this latter aspect that no NATO system could be attractive to the Europeans if the United States could singly veto its use.¹⁶¹

Due to the difficulties raised by the control issue, it was suggested by several experts that what was really needed was not joint ownership and the sharing of the decision on the use of nuclear weapons but rather sharing in strategic planning. That sort of sharing might lead later to the sharing of decision. The establishment of the Nuclear Planning Group (NPG) was, in a sense, a step in that direction.

As to the sharing of costs, it would have been prohibitive for many allies who were asked at the same time to increase their conventional forces in compliance with the "flexible response" doctrine.

It seemed that some United States officials hoped that the MLF would be discussed long enough and in sufficient depth so that Europeans asking for a greater voice in nuclear affairs would discover how costly and complicated it all was.¹⁶²

161 For an excellent discussion of the control issues, see Klaus Knorr, A NATO Nuclear Force. The Problem of Management (Princeton, N.J. : Woodrow Wilson School of Public and International Affairs, 1963) (Center of International Studies, Policy Memorandum No. 26).

162 Geyelin, op.cit., pp. 165-166.

(d) The Argument for Improving Strategic Defence

The proponents of the MLF defended its military value. As Mr. Bowie conceded, it was not essential militarily to create the Force but if created it could have a legitimate military role as part of the NATO deterrent.¹⁶³ Military arguments in favour of the MLF ran as follows : The Polaris missiles were accurate weapons; the Force would be a counter city as well as a counter force deterrent; it would fill the NATO need for MRBMs to meet missiles targeted at Western Europe by the Soviet Union; it would diversify the weapons arsenal of NATO; it would add to Western superiority by complicating Soviet defences; and it would take over part of the Soviet targets covered by the United States strategic forces. The surface ship was defended as invulnerable and efficient.¹⁶⁴

The United States Joint Chiefs of Staff never liked the MLF. The Army and Air Force were negative. Only the Navy had found the MLF technically feasible.¹⁶⁵

The opponents of the MLF in academic circles were very critical of the military value of the Force. Their arguments ran as follows : MLF was too much a military response to a political problem;¹⁶⁶ it would distract from finding a common strategy for the Alliance;¹⁶⁷ it could not be used independently

163 Robert Bowie in Assembly of Western European Union, Proceedings, 9th Sess., Part 2, IV, Dec. 1963, p. 126.

164 See Kohl, "Nuclear Sharing in NATO and the Multilateral Force", pp. 96-97 and Osgood, "The Case for the MLF : A Critical Evaluation", pp. 12-20.

165 A. Schlesinger, op.cit., p. 728 and Sorensen, op.cit., p. 568.

166 David S. McLellan, "The Changing Nature of Soviet and American Relations with Western Europe", The Annals of the American Academy of Political and Social Science, Vol. 372, July 1967, p. 23. See also Kissinger, The Troubled Partnership, p. 156.

167 John Newhouse, "The Multilateral Force. An Appraisal", Bulletin of the Atomic Scientists, Vol. XX, No. 7, Sept. 1964, p. 16.

of the larger strategic forces;¹⁶⁸ it would not add to the existing superiority of United States' strategic forces; it was not necessary because of the superiority of the West and the decreasing Soviet threat;¹⁶⁹ and it was considered that insistence on centralised strategy while diplomacy remained national would threaten mounting disputes.¹⁷⁰

On balance, by the end of 1964, the MLF appeared to be a very fragile project. All sorts of inherent difficulties persisted. Neither the NATO allies nor their counterparts of the Warsaw Pact welcomed it. In the United States, the State Department and the Navy were the only official organs of the Administration promoting the project. Among all NATO allies, only the Federal Republic of Germany continued to support the project until the end of 1965 when it was overtaken by internal as well as international events connected with the British ANF proposal and the NPG to which the study now turns its attention.

II. The Atlantic Nuclear Force

When the British Labour Party acceded to power in October 1964, it was faced with the problem of what to do with the British independent nuclear deterrent. The solution sought was to seek its internationalization. An alternative to the MLF had to be found which would avoid the insoluble problems of mixed-manning and the political objections of appearing to give the Germans a finger on the nuclear trigger.¹⁷¹ The outcome was the ANF proposal.

168 Henry A. Kissinger, "NATO's Nuclear Dilemma", The Reporter, Vol. 28, No. 7, 28 Mar. 1963, p. 32.

169 Hinterhoff, loc.cit., p. 55-60.

170 Kissinger, The Troubled Partnership, p. 163.

171 Wilson, op.cit., p. 44.

The main features of the Labour proposal were first revealed in an article in The Times of London of 23 October 1964 by its defence correspondent, Alun Gwynne Jones, later to become Lord Chalfont and Minister of State for disarmament.¹⁷² The plan was further developed by the Government and presented by Prime Minister Harold Wilson to the President of the United States Lyndon Johnson, in December 1964, during the former's visit to Washington D.C. The details of the plan were revealed by Mr. Wilson in the House of Commons on 16 December 1964.¹⁷³

1. The Components and Control of the ANF

The components of the force were suggested to be :

"First, the British V-bomber force except for those aircraft which are needed for existing commitments outside the NATO area. Those are reserved. Second, the British fleet of Polaris submarines ... Third, at least an equal number of United States Polaris submarines. Fourth, some kind of mixed-manned and jointly owned element in which the existing non-nuclear Powers could take part, and fifth ... any forces which France may decide to subscribe."¹⁷⁴

The Force would have been committed to NATO under the unequivocal control of SACEUR.¹⁷⁵ The British national element would have been irrevocably committed to NATO as long as NATO lasted as an effective organization. Only in the event of a

172 The Times, 23 Oct. 1964. The article is entitled "New British Ideas on Multilateral Force. Double Veto Proposal for Political Control".

173 Parliamentary Debates (Hansard), House of Commons, 1964-1965, (Vol. 704), pp. 430-435.

174 Ibid., p. 343. See also Statement on Defense Estimates, 1965 (London : HMSO, Feb. 1965), pp. 7-8. The mixed-manned and jointly owned element would have been 18 surface ships and 144 Polaris missiles instead of 25 ships and 200 missiles in the MLF proposal. Zedler, op.cit., p. 16.

175 Wilson, op.cit., p. 44. The ANF apparently would have had also control over all NATO tactical nuclear weapons. See Zedler, op.cit., p. 16.

break-up of NATO, the national element would have reverted to British control.¹⁷⁶

As to the political control of the force, Mr. Wilson explained that :

"The force would be under a single authority in which all countries taking part would be entitled to be represented. The United States, the United Kingdom, and France, if she took part, would have a veto over the use of all elements in the force and over any changes which might at any time be proposed in the control system ... Any other country participating would also have a veto if it wanted, though collectively they could, if they so desired, exercise their veto as a single group. In other words, European countries could either have a single veto, or if they wanted to do it on some group basis, that would be a matter for them.

The authority governing the force, acting entirely on instructions from Governments, would have these duties : To provide the force commander with political guidance; to approve the force commander's targeting and operational plans for the use of all weapons of the force; to take the decision to release nuclear weapons to the force commander; to develop agreed policy on the role of all types of strategic and tactical nuclear weapons; and, fifthly, to consult and discuss possible contingencies anywhere in the world which could give rise to the possibility of nuclear weapons being used. There would be co-ordination of targeting by the Atlantic nuclear force with the targeting of all United States forces in the Atlantic area.

To ensure that the new arrangements could not result in, or be accused of leading to, dissemination of nuclear weapons, and in particular to ensure that they could not be represented as bringing any new fingers nearer to the nuclear trigger, the charter of the force should have clauses under which nuclear members would undertake not to disseminate nuclear weapons, and the non-nuclear members would undertake not to acquire them or to acquire control over them... There should be a further prohibition of nuclear weapons passing

176 Wilson, op.cit., p. 44.

into the control or ownership not only of individual non-nuclear countries but also any group of such countries which may be formed."¹⁷⁷

2. The Objectives of the ANF

Comparing the ANF with the MLF, British objectives could be underlined more clearly.

First, the MLF would have been a newly constituted force with newly incurred expenses which were estimated to be very high. In the ANF, British contribution from its existing national deterrent forces would have virtually meant no extra expenses.

Second, in the MLF, the Federal Republic of Germany would have been the largest contributor, paying close to 70 per cent of the European share, which would have meant a great German influence in the Force and in the Alliance. In the ANF, by virtue of the participation of almost all of its strategic forces, the United Kingdom would have had the greatest influence in the force and would have been on an equal footing with the United States, while the Federal Republic of Germany would have been relegated to a second-class category by virtue of its participation in a reduced mixed-manned element.

Third, in contrast to the MLF there would have been no "European option" in the ANF. Under the latter the veto was not negotiable. Mr. Wilson was very hostile to the idea of a separate European deterrent. For him, the possibility of a future majority rule in some consortium, meant that a nuclear Power had been created.¹⁷⁸ The ANF without a "European option" would have also comforted the Soviets.

¹⁷⁷ Hansard, House of Commons, 1964-1965, (Vol. 704), pp. 434-435. On the non-proliferation aspects of the ANF, see also Lord Chalfont's statement in 1965 session of the UN Disarmament Commission in DCOR, 74th mtg, 28 Apr. 1965, paras. 28-35.

¹⁷⁸ Hansard, House of Commons, 1964-1965, (Vol. 704), p. 432.

Fourth, in the MLF, British deterrent forces would have been left intact while in the ANF almost all British deterrent forces would have been irrevocably committed to it. Thus the Labour Party would have kept its promise to give up the independent national deterrent and would have set an example for all nuclear aspirants who might be willing to follow a national nuclear course.¹⁷⁹

Lastly, from a military point of view, it would have been much more powerful and invulnerable than the MLF. Politically, control of the ANF was more clearly defined.¹⁸⁰

3. Reactions to the ANF

For obvious reasons the Germans were not expected to be enthusiastic about a scheme which offered them much less than a previous one. It could have very well appeared to them as a tactical move to delay the MLF.¹⁸¹

The French were not expected to join the ANF at the beginning as could be deduced from Mr. Wilson's declaration in the House of Commons. There was no reason to believe that France would have followed a different attitude in the case of the ANF. Its basic objections to the MLF were still valid for the ANF.¹⁸²

179 See François Duchêne, "Beyond Alliance", The Atlantic Institute (Boulogne-sur-Seine, France), The Atlantic Papers, NATO series I, 1965 (?).

180 For a brief comparison, see Hinterhoff, loc.cit., pp. 70-72.

181 See Kohl, French Nuclear Diplomacy, p. 337. The ANF's main purpose, in Kohl's view, might well have been to kill the MLF.

182 A Gaullist parliamentarian, Mr. Baumel, had the following to say about the ANF : "... militairement absurde, techniquement indéfendable, politiquement tout-à-fait irréaliste". Quoted in Hinterhoff, loc.cit., p. 73.

The gravity centre, however, was Washington where on 7 and 8 December 1964, Mr. Wilson had for the first time formally submitted his proposal to President Johnson. Mr. Wilson explained the difficulties with mixed-manning; opposition in Europe to any suggestion, however indirect, of a German finger even influencing the nuclear trigger; and the Soviet objections. If easing of tension was what was hoped for, the MLF could be a fatal provocation.¹⁸³ President Johnson was prepared to consider the idea and instructed the United States delegation at NATO to enter into full discussion with the United Kingdom and others and to prepare a full study of what was involved. For Mr. Wilson it was already a success.¹⁸⁴ He was left with the task of talking to the Germans about the ANF.¹⁸⁵

But before Wilson's visit, the tide of support for the MLF was receding in Washington which in fact explains Johnson's receptiveness to the new proposal.¹⁸⁶ Johnson and his advisers were split on the MLF.¹⁸⁷ As shown earlier, Congress was not inclined to accept it.¹⁸⁸ Johnson was advised that nobody in Europe wanted it.¹⁸⁹ There was even an indication that the Government of the Federal Republic of Germany was reluctant to push ahead with the MLF.¹⁹⁰ And though the State Department was

183 For an account of Mr. Wilson's conversation with President Johnson on the MLF and the ANF, see Wilson, op.cit., pp. 49-50.

184 Ibid., p. 50.

185 Geyelin, op.cit., p. 173.

186 For an interesting account, see Ibid., chapter 7, especially pp. 167-180.

187 Ibid., pp. 167-168.

188 Ibid., p. 170. See also Lyndon Baines Johnson, The Vantage Point. Perspectives of the Presidency 1963-1969 (London : Weidenfeld and Nicolson, 1972), p. 477.

189 Geyelin, op.cit., p. 171. McGeorge Bundy wrote the recommendation that ended US support for the MLF. See also Cleveland, op.cit., p. 194.

190 Geyelin, op.cit., pp. 171-172.

still in favour of the MLF,¹⁹¹ the MLF task force was abolished by the end of December 1964,¹⁹² and pressures on the allies were to cease.¹⁹³

The United States Administration's support of the ANF¹⁹⁴ seems to have been made easier by the idea that the project could well envelop the MLF in its original form as an integral component of a larger joint set-up.¹⁹⁵ Until December 1965 it had remained committed to a variation at least of the ANF formula and open-minded about some application of the mixed-manned feature if the Germans were adamant.¹⁹⁶

It was precisely the mixed-manned element in the ANF which had led the Soviet Union to consider the situation basically unaltered.¹⁹⁷ The Soviet representative to the 1965 session of the Disarmament Commission expressed his Government's worries in the following terms :

"Access to nuclear weapons will be gained indirectly, through the NATO bloc, on the pretext that the West German military are for the time being subordinated to the NATO command. Not only will the West German generals be members of the staff having control over nuclear weapons, but units of the Bundeswehr will have those weapons at their disposal."¹⁹⁸

191 Ibid., pp. 174-175.

192 Kohl, French Nuclear Diplomacy, p. 243.

193 Geyelin, op.cit., p. 175.

194 See Wilson, op.cit., pp. 79-80.

195 Geyelin, op.cit., pp. 177-178.

196 Ibid., p. 180. Mr. Rusk and Mr. McNamara on their way to the NATO Ministerial Meeting in December 1965 stopped in London on 17 December with a last attempt to revive, in Mr. Wilson words, the "ghost" of the MLF. Wilson, op.cit., p. 184.

197 DCOR, 72nd mtg, 26 Apr. 1965, para. 102.

198 Ibid., 87th mtg, 24 May 1965, para. 61.

This was considered incompatible with British assertions that the ANF would bind the non-nuclear members not to acquire such control.¹⁹⁹

But coming back to British-German talks about the ANF, they made little conclusive headway before they were overtaken by West German preoccupation with the September 1965 elections and with the subsequent reshuffling of Erhard's Government.²⁰⁰ Whatever parliamentary support there used to be for an integrated NATO nuclear force, such as the MLF or the Atlantic Nuclear Force (ANF), crumbled in December 1965. The Majority Leader, Herr Barzel of the Christian Democratic Union (CDU) carefully skirted the issue. Franz Josef Strauss, leader of the Christian Socialist Union (CSU), dismissed the idea of a multi-lateral force and advised instead co-operation within the newly established "McNamara Committee". The Free Democrats likewise had abandoned the idea of co-ownership and talked only about "political solutions." So did Herr Helmut Schmidt, speaking for the Social Democratic opposition (SPD).²⁰¹

The Free Democrats were against the MLF for fear of worsening relations with the Soviet Union and Eastern Europe. The CSU, and the Free Democrats as well, for fear of worsening relations with France. The SPD, while in principle it was in favour of the MLF, was more flexible because of France and the Eastern European countries.²⁰² Moreover, given the adverse development of the Federal Republic of Germany's trade and payments balance, as well as the budget deficits of 1965 and 1966, no costly

199 The Soviet representative was referring to Lord Chalfont's statement referred to earlier in note 177.

200 Geyelin, op.cit., p. 176.

201 Sommer, "The Objectives of Germany", p. 47.

202 See Zedler, op.cit., pp. 17-20.

solution involving new weapons systems would have been likely to gain a majority in the Bundestag.²⁰³

In those circumstances, Erhard paid a visit to Washington in December 1965. In Washington the MLF and the ANF were just proposals among others. The Johnson-Erhard Communiqué had shown that part of their talks were focused on the new discussions which had already started in NATO on the necessity of improving nuclear arrangements within the Alliance. That was an implicit reference to the McNamara proposed committee later to become the Nuclear Planning Group.²⁰⁴

At the end of 1965, therefore, the original MLF formula was dead. The MLF, as rightly said, had quietly but not officially receded.²⁰⁵ Politically, this was obviously face-saving for all concerned.

As to the ANF, Mr. Schröder, the German Foreign Minister, expressed his readiness, at the NATO Ministerial Meeting of December 1965, to discuss the proposal.²⁰⁶ But in London, although the ANF was still figuring in the Defence White Paper of 1966,²⁰⁷ it was no longer pursued.²⁰⁸ London's interest was also focused on the "McNamara Committee".

203 Sommer, "The Objectives of Germany", p. 47.

204 For the text of the Communiqué related to nuclear matters, see Hearings on Nonproliferation, 1966, p. 166.

205 Ruth Russell, The United Nations and United States Security Policy (Washington, D.C. : The Brookings Institution, 1968), p. 100. See also Cleveland, op.cit., p. 53 and note 111 in Chapter 3 of this study.

206 Zedler, op.cit., p. 20.

207 Statement on Defence Estimates, 1966 (Part I), The Defence Review (London : HMSO, Feb. 1966), Chapter II, para. 11.

208 Kohl, French Nuclear Diplomacy, p. 339.

IV. The Emergence of the Nuclear Planning Group

The end of the ill-fated MLF and its competitor the ANF was the result of a combination of factors. Not all allies were satisfied with one scheme or the other. The Soviet Union and its allies were stubbornly against both. The drive for a non-proliferation treaty was mounting. The schemes had to be sacrificed for the sake of paving the way for the conclusion of the Treaty. After all, the sacrifice was not so dramatic if the allies' divergences were taken into account. The "McNamara Committee" had helped in soothing down the sorrow and disappointment of some and raised new hopes and expectations for what had seemed to be a less ambitious venture but with perhaps more potential for success than its predecessors.

Before Mr. McNamara had put forward his proposal in May 1965, many critics of nuclear-sharing schemes were of the view that the best solution for taking part in the nuclear strategy of the Alliance was better co-ordination in targeting and planning phases of strategy.²⁰⁹

Mr. McNamara's proposal was very much in line with those views.²¹⁰ In May 1965, with the agreement of Secretary Rusk, Mr. McNamara proposed at a NATO Council meeting that the Alliance establish a five-member "select committee".

There followed a complex of private negotiations among the permanent representatives in Paris. In November 1965, the NATO Council, meeting in Paris, established a special committee of all the Defence Ministers who wanted to join, which turned out

209 For example, see Silard, loc.cit., p. 20; Kissinger, The Troubled Partnership, pp. 165-171; Alastair Buchan, "The Changed Setting of the Atlantic Debate", Foreign Affairs, Vol. 43, No. 4, July 1965, pp. 585-586; and Beaufre, "The Sharing of Nuclear Responsibilities. A Problem in Need of Solution", pp. 418-419.

210 In 1957 US Secretary of State Foster Dulles refused an idea of establishing a nuclear planning group. See Wiegele, loc.cit., p. 468.

to be ten. They met for the first time in Paris at that time.²¹¹ The ten were Belgium, Canada, Denmark, the Federal Republic of Germany, Greece, Italy, the Netherlands, Turkey, the United Kingdom and the United States.²¹² The ten had decided that they wished to be better informed on the nature of the United States force, the potential use of it, the likely results of such use and the plans for future changes in the force. The special committee was divided into three subgroups : One dealing with communications, i.e., the capability for prompt consultation in the event of potential use of the force; another dealing with the basis of such a decision, i.e., the intelligence information which would be available at the time to heads of States prior to consultation; and the third, of which Mr. McNamara was Chairman, dealing with the planning of nuclear operations.²¹³ The first two working groups were later deactivated.²¹⁴

Further negotiations narrowed participation on the third subgroup, i.e., the nuclear planning working group, which was known to become the centre ring, to five. They were the United States, the UK, the Federal Republic of Germany, Italy and Turkey (which was elected to represent the small countries). The subgroup was promptly dubbed, by the newspapers, the

211 See Cleveland, op.cit., p. 53 and Robert McNamara in Hearings on Nonproliferation, 1966, p. 82. Mr. Chet Hollifield, Vice Chairman of the Joint Committee on Atomic Energy had left the impression in the 1968 hearings on the NPT in the Senate Committee on Foreign Relations that the idea of a Committee was recommended by him to Harlan Cleveland who was then US Ambassador to NATO. See Hearings on NPT, 1968, p. 147.

212 W.B. Bader, "Nuclear Weapons Sharing and the 'German Problem'", Foreign Affairs, Vol. 44, No. 4, July 1966, p. 700.

213 Robert McNamara in Hearings on Nonproliferation, 1966, pp. 82-83.

214 Coffey, "Strategy, Alliance Policy, and Nuclear Proliferation", p. 987.

"McNamara Committee".²¹⁵ France opted out of the whole enterprise.²¹⁶

Convinced by midsummer of 1966 that this new nuclear intimacy of the nuclear planning working group could be made to work, the members agreed at their fall 1966 meeting in Rome to recommend a two-tiered set-up; an open-ended Nuclear Defence Affairs Committee which would supposedly hold all the power and do none of the work; and a permanent Nuclear Planning Group to do the work and therefore make allied nuclear policy. Despite the political complications of doing so, the NPG was to be kept as small as possible, to engage the personal participation of the Defence Ministers.²¹⁷

McNamara felt especially strongly about keeping the NPG small. At the regular December meeting of the NATO Council in 1966, France, Iceland, and Luxembourg stayed off the Nuclear Defence Affairs Committee by their own choice. Of the remaining twelve Portugal and Norway decided at the time not to join the nominally subordinate Nuclear Planning Group. That Group had to be expanded to seven to accommodate the ambitions of the remaining ten, and even so two classes of membership had to be

²¹⁵ Cleveland, op.cit., p. 54.

²¹⁶ The McNamara proposal appeared to France as an attempt to associate her with other non-members of the nuclear club in decision making on secondary nuclear problems. France, however, did not oppose the existence of the Committee. Kohl, French Nuclear Diplomacy, op.cit., p. 245. See also Gallois, Paradoxes de la Paix, pp. 92-96. General Gallois was very critical of the "McNamara Committee". One of his arguments runs as follows : "Le Comité McNamara ne pouvait être qu'un leurre destiné à fournir au gouvernement de Bonn les apparences d'une solution à un problème parfaitement insoluble : Garantir l'Allemagne Fédérale sans courir les risques inhérents à pareille garantie." (p. 94).

²¹⁷ Cleveland, op.cit., p. 56.

established. Four permanent seats were given to the UK, Germany, Italy and the United States; and the three other seats were to rotate among Belgium, Canada, Denmark, Greece, the Netherlands and Turkey. It was decided that both the larger Committee and the NPG would be chaired by the Secretary-General of NATO.²¹⁸

By the time the NPG began its official existence in early 1967, its work focused on inquiring into the usability of tactical nuclear weapons. Since the emergence of the "flexible response" doctrine, the need was felt for a reconsideration in depth of when and under what conditions tactical weapons could be used.²¹⁹

It is beyond the scope of this study to go into reviewing the work of the NPG. The significant fact is that a framework for discussions on nuclear strategy had been created where sharing of knowledge and planning had been substituted for sharing of ownership and control in the previous schemes.

It remains to be said that the Soviet Union was very prompt in denouncing the McNamara proposal soon after its submission to United States allies in NATO on May 31, 1965. Two days later, on the second of June, the Soviet representative at the 1965 session of the Disarmament Commission qualified the proposal as "the most dangerous proposal for placing nuclear weapons within the grasp of West Germany, for allowing West Germany to have a hand in working out the strategy of their use and to participate in their control."²²⁰ The "McNamara Committee" was put on the same level as the MLF and the ANF as leading to the indirect access of nuclear weapons to States which did not possess them. In Soviets' view, a non-proliferation treaty must

218 Ibid., pp. 56-57.

219 For the handling of the tactical nuclear weapons by the "Group", see Ibid., pp. 60-65.

220 DCOR, 90th mtg, 2 June 1965, para. 34.

bar all those forms of proliferation.²²¹ Six months later, on 8 December 1965, Foreign Minister Gromyko said, in an address before the Supreme Soviet, that attempts "to camouflage the FRG's accession to nuclear weapons through the establishment of some sort of committee" would contradict the Potsdam Agreement and other allied commitments to prohibit German militarism.²²² However, Soviet objections to the NPG proved not to be a serious obstacle towards the final conclusion of the NPT.

* * * * *

To sum up, the MLF, which would have allowed for joint ownership and control of a strategic nuclear system, had met with insurmountable difficulties. Instead of solving the nuclear-sharing problem, it exploded and brought to the fore all kinds of problems pertaining to European rivalries, nuclear ambitions and competing priorities.

MLF objectives were also very questionable. The MLF devised as a non-proliferation measure could have very well, on the contrary, led to proliferation. Secondly, there were certainly other means for attaining European unity other than devising a system which, in the long run, would have deepened European rivalries and conflicting interests. Sharing control of nuclear weapons was in fact a fictitious assertion as long as the United States nuclear monopoly continued through the right to exercise its veto on the use of the force. Militarily, the force would not have added much to the Alliance's nuclear capabilities.

221 Ibid., para. 38 and 99th mtg, 14 June 1965, para. 79. See also L. Vidyasova, "New Debates in the 'Atlantic Club'", International Affairs (Moscow), No. 4, Apr. 1966, p. 43.

222 The Current Digest of the Soviet Press, Vol. XVII, No. 51, 12 Jan. 1966, pp. 5-6.

The lessons which may be drawn from the MLF experience are manifold. It showed that there were limits on what NATO as a coalition of sovereign States with divergent interests and priorities can do in the realm of nuclear defence. It demonstrated that the Federal Republic of Germany was not yet wholly trusted and was still feared by its own allies, not to mention the Soviet Union and its allies. The United Kingdom's persistence to preserve a measure of independence for its nuclear deterrent and France's development of its force de frappe had exemplified the irreversible trend of nuclear weapons' proliferation once it had taken place. Proposals for including the independent deterrents in a larger set-up, either a multinational force as suggested by the United Kingdom or a force in the service of a future united Europe as alluded to by France, had appeared to be founded on national objectives of prestige and hegemony. Lastly, the United States was under no conditions ready to relinquish control over its own nuclear weapons.

The MLF's apparent virtue was to allow the steam off. It was something to be discussed when there was great need for discussing the nuclear affairs of the Alliance. It may have been an inescapable exercise for self-appraisal and a better understanding of alliance relationships on the road to more realistic approaches.

The ANF seemed to have been cleverly devised to kill the MLF. The NPG had led to the final abandonment of both proposals. Co-ordination and planning of strategy had become the objective. Although it was rather difficult to predict and plan for all future contingencies, the NPG appeared to be a necessary organ in this respect and the best available solution for nuclear sharing in the context of the Alliance.

In conclusion, all nuclear sharing plans, whether the two-key system, co-operation regarding atomic information for purposes of defence, the MLF, the ANF or the NPG might very well

prove to be instructive and educational in case a unified nuclear deterrent of a future united Europe is erected, whether independently or in close conjunction with a United States deterrent. Nuclear sharing exercises might prove in such an eventuality that they have not been sterile after all.

CHAPTER 5

Basic Obligations : Articles I and II

Texts :

Article I

Each nuclear-weapon State Party to this Treaty undertakes not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly, or indirectly; and not in any way to assist, encourage, or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or explosive devices.

Article II

Each non-nuclear-weapon State Party to this Treaty undertakes not to receive the transfer from any transferer whatsoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or explosive devices directly, or indirectly; not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices; and not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices.

* * * * *

Articles I and II of the NPT were, as we have seen, the result of lengthy negotiations between the United States and the Soviet Union as to preclude any possibility of loop-holes,

especially those which could lead to the proliferation of nuclear weapons through military alliances. The nuclear sharing arrangements within NATO were at the centre of the negotiations and the ensuing result was the foreclosure of certain forms of nuclear sharing.

The formulation of Articles I and II since the presentation of the first American draft of 17 August 1965 and the first Soviet draft of 24 September 1965 followed by the US amendment of its draft on 21 March 1966, took two years of laborious negotiations. Once the two articles were agreed upon by the United States and the Soviet Union in their first identical drafts of 24 August 1967, they remained unaltered until the NPT was finally commended by the UN General Assembly at its twenty-second resumed session in 1968.¹

However, if the final formulation of both Articles were considered satisfactory by the United States and the Soviet Union, as far as principle (a) is concerned, this was not the case with many other States participating in the negotiations or the discussions which led to the final formulation of the Treaty. Their various concepts of loop-holes in relations to Articles I and II differed from those of the two super-Powers, which were mainly preoccupied with NATO arrangements and non-proliferation of nuclear weapons to non-nuclear-weapon States. Some participants in the negotiations put forward suggestions and even formal amendments with a view to redrafting or modifying the two Articles. However, they were all unacceptable to the two super-Powers.

The analysis of Articles I and II as far as principle (a) is concerned leads inevitably to a minute study of both Articles and their future implications, which would extend sometimes

1 See Appendix 3. For a brief summary of the formulation of Articles I and II, see Burns, "The Non-Proliferation Treaty", pp. 793-797.

beyond the limits of the application of principle (a). On the other hand, in relation to the other provisions of the Treaty and the extent to which they comply with principle (a), it was found preferable to study them in relation to the application of the remaining four principles without overlooking their compliance with principle (a).

In the following sections we shall endeavour to analyse the two Articles in the light of previous drafts and the discussions which took place thereupon. First of all, we shall address ourselves to the definition of the contracting parties, i.e., the nuclear-weapon States and the non-nuclear-weapon States. Secondly, we shall deal with the object of the obligations incurred by the NPT, i.e., nuclear weapons and other nuclear explosive devices. Thirdly, we shall dwell on the "raison d'être" of the Treaty, i.e., non-transfer and non-acquisition of nuclear weapons or other nuclear explosive devices so as to preclude the proliferation of nuclear weapons to non-nuclear-weapon States.²

But before going into the detailed analysis of the two articles, two brief remarks are most pertinent. Articles I and II were considered by some as two sides of the same coin.³ Article II was even considered as "almost the mirror reflection of Article I".⁴ This sort of oversimplification overshadows the different far-reaching obligations of the two categories of States. Moreover, it was argued that there was nothing in

2 The peaceful uses of nuclear energy and the peaceful uses of nuclear explosions (Articles IV and V) are also the subject matter of NPT obligations although incidental to the main purpose of the Treaty.

3 For example, see A/C.1/PV. 1561, 6 May 1968, para. 68 (Netherlands).

4 George Bunn, "Horizontal Proliferation of Nuclear Weapons" in Bennett Boskey and Mason Willrich (Eds.), Nuclear Proliferation : Prospects for Control (New York : Dunellen, 1970), p. 31.

Article I which was not already in Article II and therefore Article I was redundant and the treaty could have been concluded exclusively between the non-nuclear-weapon States without the nuclear-weapon States being parties to it.⁵ As will be shown later in the study, this sort of judgment does not take into account, inter alia, the significance of nuclear-weapon States' obligations in the context of a binding international legal instrument such as the NPT which go beyond the basic obligations in Article I.

I. The Parties to the Treaty : The Question of Definition⁶

The NPT deals with two categories of States : "nuclear-weapon States" and "non-nuclear-weapon States". In the first American draft of 17 August 1965, the terms used were "nuclear States" and "non-nuclear States", and in the Soviet first draft of 24 September 1965, the terms used were "Parties to the Treaty possessing nuclear weapons" and "Parties to the Treaty not possessing nuclear Weapons". The American draft as amended on 21 March 1966 used for the first time the terms which finally appear in the Treaty. The American representative in submitting the amendments to the ENDC explained that the new terms were inspired by the representative of India who had pointed out that there were States with important programmes for peaceful uses of nuclear energy which had wisely chosen to refrain from manufacturing or acquiring nuclear weapons, and therefore it was inaccurate to define such States as "non-nuclear".⁷

5 K. Narayana Rao, "The Draft Treaty on Non Proliferation of Nuclear Weapons : A Critical Appraisal", Indian Journal of International Law, Vol. 8, No. 2, Apr. 1968, p. 227.

6 The question of "universality" is treated in Part V of the study.

7 See ENDC/PV. 250, 22 Mar. 1966, pp. 250-251 and George Bunn, "U.S. Non-Proliferation Policy", in Dougherty and Lehman, Jr., op.cit., pp. 154-155. For the Indian statement, see ENDC/PV. 223, 12 Aug. 1965, p. 14. The Indian representative welcomed the change. ENDC/PV. 263, 10 May 1966, p. 8.

The "nuclear-weapon States" are defined in Article IX, paragraph 3 of the Treaty, relating to signature, ratification and entry into force, as the following :

"... For the purpose of this Treaty, a nuclear-weapon State is one which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to 1 January 1967."

In the first American draft of 17 August 1965, article IV stipulated that :

"(a) --'nuclear State' means a State possessing independent power to use nuclear weapons as of _____ (date).

(b) --'non-nuclear State' means any State which is not a nuclear State."

Article IV in the US amendments to its draft of 17 August 1965 presented on 21 March 1966 used different definitions. It stipulated that :

"(a) 'Nuclear-weapon State' means a State controlling nuclear weapons as of (date).

(b) 'Non-nuclear-weapon State' means any State which is not a 'nuclear-weapon State'."

As will be explained in Section III of this Chapter, these definitions in both the original draft and the amendments were in concert with the non-proliferation concept of Articles I and II of both texts.

The Soviet draft of 24 September 1965 did not include any separate definitions though it used the terms "possessing" and "not possessing". The term "possessing" was severely criticised by the United Kingdom representative to the ENDC on two grounds. First, the term was not tied to any base date with the possible consequence that a State would delay its ratification of the treaty until it built its own nuclear weapons. Secondly, a State could have mere custody, and therefore possession, of the nuclear weapons with the paradoxical situation of becoming

a nuclear State with all the power to manufacture nuclear weapons.⁸

However, those possibilities were excluded in the definition provided by the NPT and which had originally appeared in Article VI, paragraph 3 of the first identical drafts of 24 August 1967 and then in Article IX, paragraph 3 of the 18 January and 11 March 1968 drafts.

According to the definition provided in the NPT, a State would qualify as a nuclear-weapon State in meeting three conditions; to manufacture a nuclear weapon or other nuclear explosive device, to explode the weapon or the device and to have accomplished both before the first of January 1967.⁹ The definition actually covers the United States, the Soviet Union, the United Kingdom, France and the People's Republic of China. However, a hypothetical loop-hole could be found in the definition. If a State had manufactured and exploded in secrecy a nuclear weapon or a device before the prescribed date without the explosion being detected or identified, it could later make it known and qualify as a "nuclear-weapon State" in the context of the Treaty. This hypothesis led one representative to declare that "this definition actually leads to a limitation of the five Powers which are at present the only ones known to have manufactured and exploded a nuclear weapon or other nuclear explosive device before 1 January 1967."¹⁰ (Emphasis added.)

8 ENDC/PV. 270, 5 July 1966, pp. 35-36.

9 It had been argued, before a definition was finally formulated, that the best criterion for defining a "nuclear-weapon State" was the national decision to fabricate or otherwise possess a nuclear explosive as opposed to other possibilities such as the actual test of a nuclear weapon. See D.G. Brennan, Some Remarks on the Spread of Nuclear Weapons (Croton-on-Hudson, New York : Hudson Institute Paper, HI-827-P, 4 Apr. 1967), pp. 1-3.

10 ENDC/PV. 367, 28 Feb. 1968, para. 40 (UAR). See also ENDC/PV. 333, 26 Sept. 1967, para. 33 (UAR).

Another hypothesis very much related to the previous one and which was raised during the discussions of the NPT is the following : What would be the status of an emerging new nuclear-weapon State which would wish to become a party to the NPT ? The implications are important in terms of the obligations incurred.¹¹ The question obviously does not arise if the new nuclear State is a Party to the Treaty. This would be an extreme case of violation of its undertakings under the NPT. But if the new nuclear State is not yet a party to the Treaty, the first proper questions to be asked (as in the previous case of violation) would be rather : Is not the objective of the NPT lost by the emergence of a sixth nuclear Power ? Will the Treaty last ? The answers would be hard to predict in future prevailing circumstances which we intend to treat elsewhere in this study. However, if the Treaty survives the painful test, the new emerging nuclear State could accede to the NPT by the mere deposit of its instrument of accession with one of the three Depositary Governments according to Article IX, unless the three Governments, in retaliation, refuse to receive the instrument of accession and prevent thereby the new nuclear State from becoming a party to the Treaty. If it were to become a party, a strict interpretation of Article IX, paragraph 3 would exclude the new nuclear State from the definition of a nuclear-weapon State under the NPT.¹² The new State would find itself in the peculiar position of not being a nuclear-weapon State, but rather a non-nuclear-weapon State, as there is no third category of States in the NPT. In such an eventuality it would find itself, for example, under the obligation of Article II, not to manufacture nuclear weapons or

11 See A/C.1/PV. 1560 (prov.), 3 May 1968, p. 42 (Brazil).

12 See Hearings on NPT, 1969, p. 359. Mr. Adrian Fisher, the Deputy Director of the US Arms Control and Disarmament Agency confirmed that the definition would exclude any nation which acquires a nuclear capacity after the fixed date.

other nuclear explosive devices. That is why we tend to exclude such a hypothetical case unless either the new nuclear State opts, after a lapse of time, to freeze its production of nuclear weapons and other nuclear explosive devices, or succeeds in securing either the amendment of Article IX, paragraph 3 of the NPT, so that a new definition of a nuclear-weapon State would englobe it, or the amendment of certain provisions of the NPT which would allow the Parties to it the right to manufacture and apply nuclear explosive devices for peaceful purposes. However, it is reasonable to concede that such hypotheses are far-fetched. The example of India, which exploded its "peaceful" nuclear device on 18 May 1974, confirms so far such an assessment.

Another significant implication of the definition is that a nuclear State which is not a nuclear-weapon State under the NPT, would be precluded from qualifying, under the US Atomic Energy Act, for assistance in the design, development and fabrication of atomic weapons.¹³ However, the United Kingdom was the only nuclear-weapon State to have benefitted so far from such provisions of the Act.

Articles I and II of the NPT neither take into consideration the level attained by the nuclear-weapon States in developing their nuclear weapons and nuclear explosive devices nor the level attained by the non-nuclear-weapon States in their peaceful uses of nuclear energy. The distinction between the two categories is, therefore, a simple one. It is, however, a technological distinction and a de jure one whereas before there was only a de facto distinction.¹⁴

13 Memorandum Furnished by the Atomic Energy Commission to the US Senate Committee on Armed Services in Hearings on Military Implications of NPT, p. 141.

14 Article I of the Test-Ban Treaty of 1963 imposes on each of the Parties the same obligations (see Appendix 5). One French writer commenting on the distinction between States in the NPT has qualified the nuclear-weapon States as the "privileged" and the non-nuclear-weapon States as the "Tiers-Ordre" subjected to the goodwill of the former. Michel Eyraud, "Prolifération : danger imminent ou prétexte utile ?", Stratégie, No. 12, Avr.-Juin 1967, p. 93.

There was a tendency, however, to classify States in respect to nuclear weapons in categories of three or four States.¹⁵ Mrs. Alva Myrdal, the representative of Sweden to the ENDC, commenting the simple division of countries into nuclear and non-nuclear in the American and Soviet treaty drafts of 1965, broke the spectrum of positions into roughly four different categories; the nuclear super-Powers, other Powers with certain nuclear-weapon capabilities, States with potential nuclear-weapon capabilities¹⁶ and definitely non-nuclear-weapon countries. Mrs. Myrdal wondered whether these highly different situations could be encompassed in one and the same treaty.¹⁷

However, the outcome was a simple division of countries into nuclear-weapon States and non-nuclear-weapon States. As the representative of Japan to the First Committee of the UN General Assembly rightly pointed out, "(t)he distinction will be dissolved only when all nuclear weapons are eliminated from the national arsenals of all States."¹⁸

The simple division of countries adopted by Articles I and II of the NPT did not, in fact, withstand the test of time, not only because of India's emergence in May of 1974 as a new nuclear Power but also because of the emergence in February of 1975 of a group of nuclear suppliers, the so-called London Suppliers'

15 For example, see ENDC/PV. 240, 15 Feb. 1966, pp. 16-17 (India); ENDC/PV. 243, 24 Feb. 1966, p. 8 (Sweden); and GAOR, 21st Sess., 1st Cttee, 1438th mtg, 1 Nov. 1966, para. 34 (Kuwait). In the academic circles, see, for example, Keijo Korhonen, "Disarmament Talks as an Instrument of International Politics", Cooperation and Conflict, No. 3, 1970, p. 154.

16 States with potential nuclear-weapon capabilities are variously called : threshold nuclear-weapon Powers, quasi-nuclear Powers, near-nuclear nations ... etc. See later Part V of this study.

17 ENDC/PV. 243, 24 Feb. 1966, p. 8. Mrs. Myrdal, however, offered no solution.

18 A/C.1/PV. 1565 (prov.), 10 May 1968, p. 32.

Club, representing 16 nuclear-weapon and non-nuclear-weapon States. With a view of complementing the provisions of the NPT by a practice of agreed export constraints and safeguards, the group had drawn a set of guidelines which were released only in early 1978.¹⁹ The creation of such a group highlights and sharpens also the division of States into two new categories, i.e., suppliers and recipients, a division that will be later explored with regard to the NPT provisions relating to the promotion of peaceful uses of nuclear energy.

II. The Object of NPT's Obligations : Nuclear Weapons and Nuclear Explosive Devices

1. Nuclear Weapons

No definition of "nuclear weapons" appears in the text of the Treaty. The US amendments to its first treaty draft of 17 August 1965 submitted to the ENDC on 22 March 1966 included a reference to "nuclear weapons" followed by a blank (Article IV(d)). The United States explained that it was "convinced of the need for such a definition, but believe that it is not essential at this point in our negotiations and can be formulated at an appropriate technical level at the appropriate time."²⁰

When Gerard Smith, the newly appointed Director of the US Arms Control and Disarmament Agency, was asked by one senator, in the Hearings held in February 1969 by the US Senate Committee on Armed Services on the military implications of the NPT, why a definition was not provided for both "nuclear weapons"

19 For the guidelines see IAEA Doc. INFCIRC/254, Feb. 1978 and INFCIRC/254/Add.1, Mar. 1979. The guidelines are reproduced in Appendix 19. The State members of the group as deduced from the above documents are: Australia, Belgium, Canada, Czechoslovakia, France, the FRG, the GDR, Italy, Japan, the Netherlands, Poland, Sweden, Switzerland, UK, US and the USSR.

20 ENDC/PV. 250, 22 Mar. 1966, p. 11 (Adrian Fisher, the US representative).

and "other nuclear explosive devices", Mr. Smith's answer focused on defining the terms and not the reasons why they were not defined in the NPT.²¹ We tend to agree with the view of Mason Willrich, a former Assistant General Counsel in the United States Arms Control and Disarmament Agency, that a definition similar to the one provided by the Treaty of Tlatelolco²² (Treaty for the Prohibition of Nuclear Weapons in Latin America - Article 5) would perhaps have highlighted the Soviet Union's concession to the status quo regarding the United States' arrangements within NATO.²³

Definitions were provided, for example, in the following national and international legal instruments :

The United States Atomic Energy Act of 1954, as amended, provides the following definition :

"The 'atomic weapon' means any device utilizing atomic energy, exclusive of the means for transporting or propelling the device (where such means is a separable and divisible part of the device) the principal purpose of which is for use as, or development of, a weapon, a weapon prototype, or a weapon test device."²⁴ (Emphasis added.)

Article 5 of the Treaty of Tlatelolco provides a similar definition which seems to have been derived from the previous text :

"For the purpose of this Treaty, a nuclear weapon is any device which is capable of releasing nuclear energy in an uncontrolled manner and which has a group of characteristics that are appropri-

21 Hearings on Military Implications of NPT, p. 123 (Question No. 30).

22 See this section below.

23 Mason Willrich, "The Treaty on Non-Proliferation of Nuclear Weapons : Nuclear Technology Confronts World Politics", The Yale Law Journal, Vol. 77, No. 8, July 1968, p. 1463. For nuclear-sharing arrangements allowed under the NPT, see Section III below.

24 United States Code, Vol. 9, Title 42, 1970, Section 2014 (d), p. 10316.

ate for warlike purposes. An instrument that may be used for the transport or propulsion of the device is not included in this definition if it is separable from the device and not an individual part thereof."²⁵

There is, however, a significant distinction between the two definitions. The subjective element of "intent" or "purpose" only manifests itself in the US definition. The absence of a similar subjective element in the Latin American text raised a controversy related to the right of Parties to manufacture nuclear explosive devices for peaceful purposes, as will be shown below. It is also quite obvious from the above definitions that nuclear delivery and military propulsion systems are excluded.

Until very late in the discussions of the NPT in the twenty-second resumed session of the UN General Assembly (1968), there was still confusion and inadequate consensus on what precisely was to be understood by the term "nuclear weapons".²⁶ The term had only been clearly understood from the Statements made by US officials in the hearings held by the different Committees of the US Congress.

The term "nuclear weapons" meant nuclear bombs and warheads. US Secretary of State, Mr. Dean Rusk, stated in the Senate Committee on Foreign Relations that the Treaty "does not deal with, and therefore does not prohibit, transfer of nuclear delivery vehicles or delivery systems, or control over them to any recipient, so long as such transfer does not involve bombs or warheads."²⁷ The Soviets raised no objection to this inter-

25 ENDC/186, 21 Feb. 1967, pp. 12-33 (see Appendix 8).

26 For example, see A/C.1/PV. 1571 (prov.), 20 May 1968, p. 56 (South Africa).

27 Hearings on NPT, 1968, p. 5. Mr. Rusk was in fact repeating the answer to the first question in "Questions on the Draft Non-Proliferation Treaty Asked by U.S. Allies Together with Answers Given by the United States" quoted in Ibid., pp. 262-263. For the remaining questions and answers see Section III below.

pretation.²⁸ A nuclear-powered submarine, for example, is not considered a weapon.²⁹

The NPT applies not only to offensive nuclear weapons but also to defensive ones such as atomic demolition munitions (ADMs),³⁰ and nuclear warheads associated with anti-ballistic-missiles' defence systems (ABMs).³¹

2. Other Nuclear Explosive Devices

The term "other nuclear explosive devices" appeared for the first time in the two identical treaty drafts of 24 August 1967. However, it was evoked in the debates on non-proliferation since August 1966 when the US delegation to the ENDC raised for the first time in the Conference the question of nuclear explosions for peaceful purposes, pointing out that no State could develop a capability of detonating nuclear devices for peaceful purposes without also acquiring a capability of detonating nuclear weapons. The US believed, therefore, that a

28 Adrian Fisher in Hearings on NPT, 1969, p. 340. Mr. Fisher explained that the aforementioned "Questions and Answers" were seen by the Soviets and key members of the ENDC before it was made public and there was no objection.

29 Ibid. Robert McNamara said, in answer to a question addressed to him in the 1966 hearings held on non-proliferation of nuclear weapons by the US Congress Joint Committee on Atomic Energy, that a nuclear-powered submarine is not a weapon within the meaning of a non-proliferation pact. He went on to say : "The submarine of course is a weapon system, itself. But it is not a nuclear weapon, the nuclear power would be used solely for the purpose of propelling the submarine." (Emphasis added.) Hearings on Nonproliferation, 1966, p. 79. See the implications of such a definition in Section III below.

30 See General Earle Wheeler, Chairman of the Joint Chiefs of Staff of the US Army in Hearings on Military Implications of NPT, p. 20.

31 Dr. Edward Teller, renowned American scientist and a critic of the NPT, deplored the weakness of the NPT which deprived US Allies from ABM defense systems of their own with the consequence of driving more Allies out of NATO. Hearings on Arms Control, 1968, p. 247.

non-proliferation treaty should cover both nuclear weapons and nuclear explosives for peaceful purposes without prejudicing the availability of such explosions for other States when they become technically and economically feasible on condition that they would be performed under the control of the State furnishing the service.³²

Although no specific definition was provided for "other nuclear explosive devices" in the text of the NPT, the negotiating history of the Treaty, since the US raised the issue in 1966, demonstrated that "other nuclear explosive devices" meant nuclear explosive devices used for peaceful purposes, such as digging canals and building dams. After all, the phrase "other nuclear explosive devices" seems to have its origin in the first paragraph of Article I of the 1963 "Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water" which reads :

"1. Each of the Parties to this Treaty undertakes to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion ..." (Emphasis added.)

The negotiating history of the Test-Ban Treaty revealed that explosions for peaceful purposes were permitted according to Article II of an August 1962 US draft treaty subject to controls, because of the difficulty of distinguishing peaceful purpose explosions from weapon tests. But as the Soviet Union rejected that article because of controls, nuclear explosions for peaceful purposes were banned in the final Treaty text and

32 See ENDC/PV. 280, 9 Aug. 1966, pp. 13-16 (Mr. Fisher). Before the adjournment of the ENDC session in 1966, US views were commented on only by the United Kingdom and Canada who were favourable to them. See ENDC/PV. 281, 11 Aug. 1966, pp. 18-19 (UK) and ENDC/PV. 285, 24 Aug. 1966, pp. 13-15 (Canada).

33 DCOR, Suppl. for Jan. to Dec. 1963, Doc. DC/208, Ann. 1, Sec. G(ENDC/100/Rev. 1, 30 July 1963).

the phrase "any other nuclear explosion" was inserted in Article I at the appropriate points.³⁴

Moreover, the negotiating history of the NPT also demonstrated that there was a unanimous conviction that nuclear explosive devices were indistinguishable from nuclear weapons. As the representative of one country put it in the First Committee of the UN General Assembly at its twenty-second session, "... we find difficulty in knowing where to draw the line, since we are told - and have no reason to doubt - that there is no difference in technology between military and non-military explosions."³⁵ This technological fact was confirmed by the study prepared by the group of consultant experts appointed by the UN Secretary-General on "Effects of the Possible Use of Nuclear Weapons ..." referred to earlier in Chapter 3.³⁶ Consequently, the majority of States held that the proliferation of peaceful nuclear explosives should be prohibited in a non-

34 For the comparison between the 1962 US draft and the Treaty text, see US Congress, Senate, Committee on Foreign Relations, Hearings: The Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Underwater, 88th Congress, 1st Session on Executive M (Washington, D.C.: US Government Printing Office, 1963), pp. 814-816, hereinafter cited as Hearings on Test Ban. See also the letter of the General Council of the Defence Department to the Chairman of the Committee on Foreign Relations in Ibid., pp. 177-178.

35 A/C.1/PV. 1552 (prov.), 15 Dec. 1967, pp. 38-40 (Malaysia). For other examples, see UN Doc. A/6817, 19 Sept. 1967, Annex V.

36 See note 125 in Chapter 3. See also the paper prepared by Dr. Ulf Ericsson, renowned Swedish scientist, for the Conference of Non-Nuclear-Weapon States. Ulf Ericsson, "The Question of Nuclear Explosions for Peaceful Purposes by Non-Nuclear-Weapon States and the Possibility of Misuse of Such Technology for the Production of Nuclear Weapons", Conference of Non-Nuclear-Weapon States, Geneva, 1968 (A/CONF. 35/DOC. 3, 3 July 1968), p. 9, hereinafter cited as "The Question of Nuclear Explosions".

proliferation treaty to avoid a loop-hole.³⁷ Some States defended such prohibition with the same zeal as the original co-drafters, i.e., the US and the Soviet Union.³⁸ This, however, did not mean prohibiting the proliferation of future benefits of the application of nuclear explosions for peaceful purposes, a question which Article V of the NPT deals with as will be shown in Chapter 7.

Approval of the prohibition was qualified by some States. It was pointed out by one State representative that if and when the advance of nuclear knowledge makes a distinction between nuclear weapons and nuclear explosive devices possible, "then it is only logical to believe that the restrictions concerning nuclear explosive devices contained in a non-proliferation treaty will no longer be applicable".³⁹

Without denying the assertion that the technology was the same for nuclear weapons and nuclear explosives for peaceful

37 For examples, see UN Doc. A/6817, 19 Sept. 1967, Ann. V, pp. 21-24.

38 For example, the representative of the UAR to Committee Two of the Conference of Non-Nuclear-Weapon States remarked that some statements, as well as some draft resolutions, referred only to the renunciation of the acquisition and production of nuclear weapons. He said that any legally binding renunciation should also cover all nuclear explosive devices. A/CONF. 35/C.2/SR. 12, 20 Sept. 1968, pp. 126-127

39 A/C.1/PV. 1565 (prov.), 10 May 1968, p. 37 (Japan). See also A/PV. 1672 (prov.), 12 June 1968, p. 62 (Italy). In its note to the Depositary Governments upon its signature of the Treaty on 28 January 1969, the Italian Government had once more expressed the view that when technological progress would allow the development of peaceful explosive devices differentiated from nuclear weapons, the prohibition relating to their manufacture and use should no longer apply. See the text of the Italian note in Assembly of Western European Union, Proceedings, 15th Sess., Part 2, III, Dec. 1969, Doc. 499, Appendix II, pp. 220-221. It seems doubtful, however, that it can ever be possible to invent a nuclear explosive which cannot be used as a nuclear weapon. See ENDC/PV. 291, 7 Mar. 1967, para. 28 (United States).

purposes, very few States, led by Brazil and India, did not accept that a non-proliferation treaty should cover nuclear explosive devices.

At the beginning, India was more explicit than Brazil in rejecting what its representative called "non-proliferation in science and technology".⁴⁰ By 1967, during the debates in the ENDC, Brazil became very explicit in pointing out that it was not ready to waive its right to manufacture nuclear explosive devices. The tone of the Statements delivered by its representative to the Conference was sometimes very vehement in relation to this question. One of Brazil's first important statements on the subject explained that :

"Brazil does not intend to acquire nuclear weapons either by receiving or manufacturing them; but we shall not waive the right to conduct research without limitation and eventually to manufacture or receive nuclear explosives that will enable us to perform great engineering work ..."⁴¹

The Indian representative in a following meeting had also, in similar terms, refused to waive that right. He said :

"It is a question of what a country would like to do in its economic interests. In ... Switzerland, for example, which is a very developed country, they do not manufacture motor-cars. ... That does not mean that Switzerland would like to sign away the right to manufacture motor-cars if it is considered economically desirable for Switzerland. Well, we would much rather import peaceful nuclear devices. But that would be our own decision and not because of any prohibition."⁴²

This principle of not waiving a potential right had been defended by both countries in all the phases of NPT negotiations and, after its signature, in the Conference of Non-Nuclear-

40 GAOR, 21st Sess., 1st Cttee, 1436th mtg, 31 Oct. 1966, para. 15. For views similar, but less explicit, to that of India, see UN Doc. A/6817, 19 Sept. 1967, Ann. V, pp. 8-10

41 ENDC/PV. 297, 18 May 1967, para. 48.

42 ENDC/PV. 303, 8 June 1967, para. 33.

Weapon States.⁴³ They supported their stand by a set of arguments. First of all, the prohibition of nuclear explosive devices was considered to go beyond principle (a) of General Assembly resolution 2028 which had only mentioned nuclear weapons.⁴⁴ Brazil's representative at the ENDC summarised the views of his delegation in the following way :

"The development of research in the field of nuclear energy inevitably includes, at a certain stage, the use of explosions; to bar access to explosions would amount to hindering the development of the peaceful uses of nuclear energy;

Banning nuclear explosions would not be an absolute means of checking the spread of nuclear weapons for, at the present level of technology, nuclear weapons can be manufactured without resort to nuclear explosions;

Even after attaining capability to carry out explosions for peaceful purposes, non-nuclear-weapon States would still have to take several additional steps to embark on the manufacture of nuclear weapons;

To contend that non-nuclear-weapon countries ought to relinquish the possibility of developing by national means nuclear technology for peaceful purposes is, grosso modo, tantamount to requiring that peaceful countries refrain from producing conventional explosives for industrial purposes;

Peaceful nuclear explosions may provide a solution to many of the serious problems which confront Latin American countries and developing countries in general in the economic field, such as the digging of canals, the connexion of hydrographic basins, the recovery of oil fields, the release of natural gas, etc."⁴⁵

Both Brazil and India also expressed their worries about the widening of the technological gap between the nuclear-weapon States and the non-nuclear-weapon States if the latter remained technologically dependent on the former in the field of

43 A/CONF.35/SR.6, 6 Sept. 1968, p. 77 (Brazil).

44 ENDC/PV. 363, 8 Feb. 1968, paras. 41 and 50 (Brazil).

45 ENDC/PV. 293, 14 Mar. 1967, para. 37.

nuclear explosive devices for a period of 25 years, the initial duration period of the NPT as indicated in Article X, paragraph 2 of the Treaty.⁴⁶

Brazil submitted to the ENDC formal amendments to the effect of omitting any reference to nuclear explosive devices in Articles I and II as well as in Article IX, paragraph 3 (Article VI in the August 1967 draft) pertaining to the definition of the nuclear-weapon State.⁴⁷ The amendments were disregarded by the United States and the Soviet Union which maintained the view that if there were to be no loop-holes in the Treaty, the proliferation of devices which could be used as nuclear weapons should not be allowed. No other member of the ENDC, except India, sympathised with the objectives the Brazilian amendments had tried to attain. The amendments were not re-introduced in the twenty-second resumed session of the UN General Assembly, which commended the final Treaty text, although they appeared in the ENDC's report to the Assembly.

In addition to the previous arguments, Brazil, as well as two other signatories of the Tlatelolco Treaty, Argentina and Nicaragua,⁴⁸ argued that Article 18 of the Treaty permits the Parties to carry out nuclear explosions for peaceful purposes.⁴⁹ Paragraph 1 of Article 18 stipulates :

"The Contracting Parties may carry out explosions of nuclear devices for peaceful purposes - includ-

46 ENDC/PV. 363, 8 Feb. 1968, para. 56 (Brazil) and ENDC/PV. 370, 27 Feb. 1968, para. 19 (India).

47 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 16 (ENDC/201, 31 Oct. 1967) and Sec. 17 (ENDC/201/Rev. 2, 8 Feb. 1968).

48 Davis R. Robinson, "The Treaty of Tlatelolco and the United States : A Latin American Nuclear Free Zone", American Journal of International Law, Vol. 64, No. 2, Apr. 1970, p. 290.

49 See ENDC/PV. 293, 14 Mar. 1967, paras. 35-36; ENDC/PV. 327, 31 Aug. 1967, para. 18; and ENDC/PV. 367, 20 Feb. 1968, para. 67.

ing explosions which involve devices similar to those used in nuclear weapons - or collaborate with third parties for the same purpose, provided that they do so in accordance with the provisions of this article and the other articles of the Treaty, particularly articles 1 and 5."⁵⁰

Brazil, upon signing and ratifying the Treaty of Tlatelolco,⁵¹ made the following statement :

"The Brazilian Government wishes to reaffirm its interpretation of the meaning of Article 18 of this instrument. It is the understanding of the Brazilian Government that the aforementioned Article 18 allows the signatory States to carry out with their own means, or in association with third parties, nuclear explosions for peaceful purposes, including explosions which may involve devices similar to those used in nuclear weapons."⁵² (Emphasis added.)

Mexico, as well as other signatories of the Treaty of Tlatelolco, which held a position, interpreted Article 18 differently. Ambassador Alfonso Garcia Robles of Mexico, considered to be the architect of the Treaty of Tlatelolco, explained that for one of the States Party to the Treaty to carry out a peaceful nuclear explosion, it would have to prove previously that a nuclear weapon would not be required for that explosion in accordance with the objective definition contained in Article 5 of the Treaty.⁵³ And since the consensus of the ex-

50 See Appendix 6. Article I contains the essential obligations and Article 5 contains the definition of nuclear weapon quoted earlier in this Chapter.

51 Brazil signed the Treaty on 9 May 1967 and ratified it on 29 Jan. 1968. See SIPRI Yearbook 1973, pp. 438-439.

52 As quoted by the representative of Brazil in ENDC/PV. 367, 20 Feb. 1968, para. 67.

53 Article 3 of the draft treaty which resulted from the third session of the Preparatory Commission held in Mexico City from 19 April to 4 May 1966 contained a subjective element in the definition of nuclear weapon : "... a device ... intended to be used for military purposes." See Alfonso Garcia Robles, The Denuclearization of Latin America (New York : Carnegie Endowment for Inter-

perts in the matter was that this differentiation was impossible, Ambassador Garcia Robles went on to say that "it must obviously be concluded that the States parties to the Treaty will not be able to manufacture or acquire nuclear explosive devices even though they may be intended for peaceful purposes, unless and until technological progress has made possible the development of devices for such explosions which cannot be used for nuclear weapons."⁵⁴

The United States was categorical in rejecting the Brazilian contentions. William Foster, the US representative to the ENDC, explained that "...unless someone can some day invent a nuclear explosive device which cannot be used as a nuclear weapon... the treaty will prohibit contracting parties from carrying out such explosions."⁵⁵ Moreover, the Soviet Union had been reluctant to sign Additional Protocol II of the Treaty of Tlatelolco relating to the obligations of nuclear-weapon States, on the ground that, inter alia, Article 18 of the Treaty permits the explosion for peaceful purposes of devices "similar to those used in nuclear weapons", thus leaving an obvious loop-hole for the production of nuclear weapons. Apparently the Soviet Union was alarmed by the controversy among the Contracting Parties to the Treaty over the interpretation of Article 18. However, the Soviet Union signed Additional Protocol II on 18 May, 1978 and ratified it on 8 January 1979

national Peace, 1967), p. 118. Because of that subjective element, Article 13 of the draft treaty emanating from the third session of the Commission allowed parties, under certain arrangements, to develop and explode nuclear explosive devices for peaceful purposes. Ibid., pp. 124-125.

54 A/C.1/PV. 1569 (prov.), 16 May 1968, p. 41. From the numerous statements made by the Mexican representatives on Article 18, see ENDC/PV. 297, 18 May 1967, paras. 53-54 and ENDC/PV. 374, 6 Mar. 1968, paras. 6-11.

55 ENDC/PV. 291, 7 Mar. 1967, para. 28. For more US statements on Article 18, see Robinson, loc.cit., pp. 289 and 305-306 and International Negotiations, p. 65.

with a statement that it "proceeds from the assumption that the effect of Article 1 of the Treaty extends, as specified in Article 5 of the Treaty, to any nuclear explosive device and that, accordingly, the carrying out by any party to the Treaty of explosions of nuclear devices for peaceful purposes would be a violation of its obligations under Article 1 and would be incompatible with its non-nuclear status."⁵⁶

We believe it was a necessary prerequisite for the non-proliferation of nuclear weapons to cover both nuclear weapons and all other forms of nuclear explosive devices in one and the same treaty, lest a dangerous loop-hole be created. Logically speaking, if it were not for the current use of the term "nuclear weapons", it would have sufficed to mention in the NPT the term "nuclear explosive devices" which obviously englobes nuclear weapons.

The NPT and the Treaty of Tlatelolco, if the latter is correctly interpreted, are compatible in imposing restrictions on nuclear explosive devices other than weapons. The displeasure of India and Brazil with regard to the NPT and Brazil's contentions with regard to the Treaty of Tlatelolco seem to reflect a genuine desire not to forego an important option, i.e., the production and use of nuclear explosives for their economic development independently with their own means. However, the studies and experiments carried out in a country like the United States in the field of application of nuclear explosions for peaceful purposes are still, as will be shown in Part III, in an embryonic stage faced with all sorts of difficulties. These difficulties have not discouraged India from indicating its intentions to conduct underground nuclear tests when it develops the technology. The Defence Minister of India, Mr.

56 See World Armaments and Disarmament, SIPRI Year Book 1979 (London: Taylor & Francis Ltd and New York: Crane, Russak & Co., Inc., 1979) (Stockholm International Peace Research Institute), pp. 612 and 618, hereinafter referred to as SIPRI Year Book 1979. See also CCD/PV. 553, 28 Mar. 1972, pp. 34-35.

Jagjivan Ram, told the Indian Parliament on 2 May 1972 that scientists from the Indian Atomic Energy Commission "are studying the technology to conduct underground nuclear explosions for peaceful purposes."⁵⁷ As one writer noted : "India will be hard to move on this point not only for commercial reasons but because this position is consistent with India's awareness that a program including domestic nuclear explosions would give India much of the prestige China has won with its weapons program - but, in the Indian case, at far less cost and with none of the onus of becoming a nuclear weapons country."⁵⁸

The consequences of developing nuclear explosive devices for peaceful purposes by a non-nuclear-weapon State, such as India, could be far reaching. It might be hard to convince neighbours or rivals that the devices were strictly intended for peaceful purposes,⁵⁹ and thus eventually generating a process of proliferation of nuclear weapons not only in a region but in different parts of the world. The development of nuclear explosive devices for peaceful purposes could very well become the pretext for all those who wish to acquire nuclear weapons.

In conclusion, it is interesting to note how principle (a) of resolution 2028(XX) was interpreted with regard to nuclear explosive devices. For the very few, the principle referred only to nuclear weapons, thus permitting nuclear explosive devices. For the majority, the Treaty in compliance with principle (a) had to cover both nuclear weapons and other nuclear explosive devices so as to avoid a serious loop-hole. The lat-

57 International Herald Tribune, 3 May 1972. It is to be noted that within the terms of the Test-Ban Treaty, nuclear explosions for peaceful purposes are prohibited in the three other environments.

58 Bader, The United States and the Spread of Nuclear Weapons, p. 74.

59 See ENDC/291, 7 Mar. 1967, para. 27 (United States) and James E. Dougherty, "The Treaty and the Non-Nuclear States", Orbis, Vol. XI, No. 2, Summer 1967, p. 371.

ter view is definitely the valid one. However, if nuclear explosives which could not be used as nuclear weapons were invented in the future, the NPT could be amended in accordance with Article VIII of the Treaty in order to comply with such a technological breakthrough.

III. The "Raison d'Etre" : Non-Transfer and Non-Acquisition of Nuclear Weapons or Other Nuclear Explosive Devices

Articles I and II contain three different sets of obligations. With the exception of one of them, the obligations of nuclear-weapon States and non-nuclear-weapon States are not synallagmatic.

First, nuclear-weapon States undertake not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly or indirectly. Here, synallagmatically, non-nuclear-weapon States undertake not to receive the transfer from any transferer whatsoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or explosive devices directly, or indirectly.

Second - and here ends the symmetry - only non-nuclear-weapon States undertake not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices.

Third, nuclear-weapon States undertake not in any way to assist, encourage, or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other explosive devices, or control over such weapons or explosive devices. Non-nuclear-weapon States undertake not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices.

1. Non-Transfer and Non-Receipt

The key word in Articles I and II and more specifically in this first set of obligations is "control". This takes us back to the problem of nuclear-sharing arrangements within NATO which was accentuated by the introduction of the first American draft of 17 August 1965 and the American amendments submitted

thereto on 21 March 1966. Both left the door open, in different degrees, for a multilateral option.

The Soviet Draft of 24 September 1965 avoided not only the possibility of such a multilateral option in the future but also other forms of nuclear sharing. The discussions in the disarmament forums focused then on the option rather than on the MLF project itself or its counterpart the ANF which, at the end of 1965, as demonstrated in the previous chapter, were receding to leave way for the "McNamara Committee". The ensuing first set of obligations in the definite texts of Articles I and II as well as their implications cannot, therefore, be understood and appreciated without evoking first their historical legislative background.

(a) Articles I and II in the First American and Soviet Drafts and Nuclear-Sharing Arrangements

(i) The American Draft of 17 August 1965 : Article I, paragraph 1, read as follows :

"Each of the nuclear States Party to this Treaty undertakes not to transfer any nuclear weapons into the national control of any non-nuclear State, either directly, or indirectly through a military alliance, and each undertakes not to take any other action which would cause an increase in the total number of States and other organizations having independent power to use nuclear weapons."
(Emphasis added.)

Conversely, Article II, paragraph 1, contained similar obligations with regard to non-nuclear States.⁶⁰

The American draft banned not only direct transfer of nuclear weapons but also indirect transfer, which was qualified as "indirectly through a military alliance". This restricted qualification of the term "indirectly" was due to the fact that the draft left open the possibility of establishing a multilateral nuclear force within NATO which, as the United States explained, would not have led to the indirect transfer of nu-

⁶⁰ See Appendix 3-A.

clear weapons to the national control of any non-nuclear State.⁶¹

The transfer prohibited was the transfer to the national control of any non-nuclear State. Transfer of nuclear weapons would have been allowed to nuclear States. The term "control" was not yet defined, but "national control" was understood to mean the individual national possession of nuclear weapons and the capability to use them independently as it could be implied from the last sentence of the first paragraph of Article I.

Under the American Draft, however, the setting up of a new organization having independent power to use nuclear weapons would have been allowed, provided that no increase in the total number of States and "other organizations" having independent power to use nuclear weapons would have occurred. To be more specific, three different situations would have been possible :

It would have been possible to create a multilateral nuclear force as long as it did not constitute an entity with power to use nuclear weapons independently of the participating nuclear States, i.e., subject to the latter's right of veto.⁶² This possibility was in fact the direct reason for formulating the draft in such a way. Although the idea of the MLF was losing ground at the time, it would have allowed for the mixed-manned element in the ANF and would have appeased the Germans who were still attached to the MLF in its original form.

It would also have been possible to create a new entity to which a nuclear State would have turned over all its nuclear weapons and renounced its right of veto over the use of the force. Decision on use could have been taken by a majority vote. The United States explained that even in the event of such a possibility "no non-nuclear nation could acquire independent power to use nuclear weapons ..."⁶³. This would have

61 ENDC/PV, 228, 31 Aug. 1965, p. 38.

62 Ibid.

63 Ibid.

left open the so-called "European option". As the United States explained :

"We would not want to preclude such an entity from possessing and controlling nuclear weapons if it should in fact develop the capacity to assume the nuclear defence responsibilities of its formerly separate national components some of which are now nuclear Powers. Such a development could indeed reduce the number of nuclear power centres."⁶⁴

The third situation which would have been permitted under the first American draft could have been "the creation of a new nuclear entity composed entirely of non-nuclear States, in the event that a pre-existing nuclear-weapon State had previously unilaterally disarmed itself of nuclear weapons".⁶⁵ The United States had conceded that this possibility was not intended.⁶⁶

It is interesting to note that the first possibility was intended, the second one was not excluded but considered as unlikely to happen and the third not intended at all. But as the United Kingdom was opposed in principle to the second possibility, Lord Chalfont, the UK representative to the ENDC, stated in the Conference that his country would prefer to see this possibility closed.⁶⁷

As the Soviet Union was vehemently opposed to the MLF and other forms of nuclear sharing within NATO, its opposition to the draft was to be expected. The draft was criticised for leaving the door open for the establishment of the MLF and the

64 Ibid., p. 39.

65 ENDC/PV. 250, 22 Mar. 1966, p. 9 (United States).

66 Ibid.

67 ENDC/PV. 225, 19 Aug. 1965, p. 10. See also Lord Chalfont, "Alternatives to Proliferation : Inhibition by Agreement", in Buchan, A World of Nuclear Powers ?, p. 126. One writer considered that the British were inclined in the ENDC to accede to Soviet apprehensions with regard to West Germany's nuclear ambitions. Kjell Goldman, "Strategic Doctrines and the Future of NATO : Some Reflections", Cooperation and Conflict, Vol. I, No. 1, 1966, p. 5.

access to nuclear weapons by the Federal Republic of Germany and other States. It insisted that a non-proliferation treaty must not allow any loop-holes or exceptions.⁶⁸

After the submission of the Soviet draft of 24 September 1965 to the UN General Assembly and before the presentation of the American amendments on 22 March 1966 to the ENDC, the Soviet Union, in criticising the American draft, went beyond the questions of the MLF or the ANF. The draft was unacceptable, as Ambassador Tsarapkin had explained, because of three omissions:

"First, in the United States draft there is no mention of any obligation not to grant non-nuclear States or groups of States the right to participate in the ownership, disposal and use of nuclear weapons.

Secondly, the United States draft fails to include the important provision that a party to the treaty possessing nuclear weapons must not place these weapons or control over them and over their emplacement and use at the disposal of units of the armed forces or military personnel of States not possessing nuclear weapons, even if such units or military personnel are under the command of a military alliance.

Thirdly, where the United States draft treaty mentions the obligations of non-nuclear Powers, there is missing the important provision that such States undertake to refrain from receiving nuclear weapons in any form whatsoever, directly or indirectly, for their ownership, control or use and that they will not participate in the ownership, control or use of such weapons or in the testing of such weapons.

It should be obvious to all that the lack of the afore-mentioned provisions in the United States draft leaves precisely those loop-holes of which, as indicated in General Assembly resolution 2028 (XX), the treaty should be void."⁶⁹

68 From the several statements made by the Soviet Representatives with respect to the first American draft of 1965, see ENDC/PV. 228, 31 Aug. 1965, pp. 34-36; GAOR, 20th Sess., 1st Cttee, 1355th mtg, 18 Oct. 1965, paras. 16-19; and ENDC/PV. 241, 17 Feb. 1966, especially pp. 24-25.

69 ENDC/PV. 245, 3 Mar. 1966, pp. 38-39.

From the very outset of the discussions which took place in the ENDC on the August 1965 draft, the United States appeared to be categorical in refusing to discuss NATO arrangements with the Soviet Union. As William Foster, the US representative, pointed out, "NATO Countries will not permit the question of their collective nuclear defence arrangements to become the subject of negotiation with the Soviet Union."⁷⁰

None of the non-aligned members of the ENDC took a position on the issue in the 1965 Session of the Conference. However, in their joint memorandum on the non-proliferation of nuclear weapons submitted to the Conference on 15 September 1965, they expressed their regret that "it has not yet been possible to reconcile the various approaches for an appropriate or adequate treaty ..."⁷¹

Moreover, very few countries expressed their views on the issue of nuclear sharing within NATO in the following 20th Session of the UN General Assembly. From those few, we have selected 5 countries not belonging to either of the two alliances in Europe. One, Nigeria, complained about the preoccupation with the maintenance of the status quo in Central Europe.⁷² Three others, Yugoslavia, Cyprus and Kenya, were not favourable to the MLF project either for being incompatible with non-proliferation,⁷³ leading to some form of proliferation,⁷⁴ or hampering measures to curb non-proliferation in Central Europe.⁷⁵ The fifth country, Finland, conceded the political fact that plans for nuclear sharing within NATO had become an obstacle to an effective treaty on non-proliferation.⁷⁶

In general, the attitude of countries of the third world

70 ENDC/PV. 228, 31 Aug. 1965, p. 40.

71 DCOR, Suppl. for Jan. to Dec. 1965, pp. 44-45, Doc. DC/227, Ann. 1, Sec. E(ENDC/158, 15 Sept. 1965).

72 See note 148 in Chapter 4.

73 GAOR, 20th Sess., 1st Cttee, 1361st mtg, 25 Oct. 1965, para. 25 (Yugoslavia).

74 Ibid., 1363rd mtg, 26 Oct. 1965, para. 33 (Cyprus).

75 Ibid., 1364th mtg, 26 Oct. 1965, para. 1 (Kenya).

76 Ibid., 1365th mtg, 27 Oct. 1965, para. 22.

was still timid. They avoided taking sides on the issue as was the case with the non-aligned members of the ENDC before the submission of any NPT draft.

At the ENDC in 1966 and before the submission of United States' amendments to the 1965 draft, five non-aligned members expressed their views on the nuclear-sharing issue. Nigeria and Ethiopia alluded to their preoccupation with the maintenance of status quo in Central Europe in the discussions on the NPT.⁷⁷ Sweden avoided taking a position on the issues of the MLF and the ANF by urging the nuclear super-Powers to agree upon the issues.⁷⁸ Burma referred to a 1963 statement made by its representative in the First Committee of the General Assembly expressing grave concern over the MLF project.⁷⁹

The UAR was then the only member of the ENDC to make an outright criticism of the 1965 American draft. It had difficulty in accepting Article I which left open the possibility that an organization having independent power to use nuclear weapons might one day take the place of one of the present nuclear States. An organization, in its view, would cause a whole series of serious problems and difficulties which sooner or later would breach the non-proliferation concept, because of a fundamental difference between the definite concept of State and the indefinite concept of an organization. To illustrate his point, the UAR representative, Ambassador Khallaf, gave the following example :

"If the organization were one day dissolved, what would happen to the nuclear arsenal over which it has autonomous power ? Would this not be divided amongst its members ? And how do we know that the

77 ENDC/PV. 235, 27 Jan. 1966, p. 30 (Nigeria) and ENDC/PV. 242, 22 Feb. 1966, p. 17 (Ethiopia).

78 ENDC/PV. 243, 24 Feb. 1966, p. 9.

79 ENDC/PV. 250, 22 Mar. 1966, p. 30. The prepared Burmese statement in the ENDC had followed the statement made by the representative of the United States in which he introduced US amendments to the 1965 draft.

members of the organization would not then wish to exercise the right to withdraw from the treaty contained in the United States and Soviet texts ? In short, by accepting this text we should be leaving the door open to a later form of dissemination, a kind of future loop-hole which might perpetuate dissemination. In other words, under cover of preventing dissemination today we should really be paving the way for future dissemination by a certain category of countries and continents.

Moreover, such an organization, by increasing its nuclear arsenal and extending its political action and interests over a wider geographical and strategic area, would increase the risks of a nuclear confrontation. We do not need a non-dissemination treaty to achieve this result."⁸⁰

(ii) The American Amendments of 21 March 1966 : Article I was redrafted to read as follows :

"Each of the nuclear-weapon States party to this treaty undertakes :

1. Not to transfer nuclear weapons into the national control of any non-nuclear-weapon State, or into the control of any association of non-nuclear-weapon States.

2. ... (assistance and encouragement)

3. Not to take any other action which would cause an increase in the total number of States and associations of States having control of nuclear weapons.

4. Not to take any of the actions prohibited in the preceding paragraphs of this Article directly, or indirectly through third States or associations of States, or through units of the armed forces or military personnel of any State, even if such units or personnel are under the command of a military alliance." (Emphasis added.)

Conversely, Article II, paragraphs 1, 3 and 4 contained similar obligations with regard to non-nuclear-weapon States.

⁸⁰ ENDC/PV. 245, 3 Mar. 1966, pp. 8-9. The UAR also considered that the principle of a nuclear organisation might infringe principle (a) of resolution 2028(XX).

The term control was defined in Article IV - (c) as the "right or ability to fire nuclear weapons without the concurrent decision of an existing nuclear-weapon State".⁸¹

The redrafted American text maintained the ban not only on direct transfer of nuclear weapons but also on indirect transfer which was more explicitly defined than in the previous draft.⁸²

Transfer of nuclear weapons to nuclear-weapon States was still allowed. The prohibited transfer was, as in the previous text, the transfer into the national control of any non-nuclear State plus the transfer into the control of any association of non-nuclear-weapon States.

Under the new formulation of Articles I and II together with the definition of control in Article IV, the third possibility referred to in relation to the 1965 draft was excluded, i.e., the creation of a new nuclear entity composed entirely of non-nuclear States. The two following situations were possible under the redrafted text :

- The creation of the MLF as long as the US and/or UK conserved the right to veto the use of the force. However, the US did not seem to have contemplated the possibility that an MLF would be used by the mere concurrent decision of the UK alone.⁸³ Moreover, the ANF would also have been allowed. The mere transfer of nuclear weapons

81 See Appendix 3-C. Commenting on the definition of "Control", the US representative explained that the decision to fire "would have to be explicit, it would have to be concurrent in time with the event; it could not be in the form of a general approval given in advance. Moreover ... control relates not merely to the right, but also to the ability to fire nuclear weapons." ENDC/PV. 250, 22 Mar. 1966, p. 6.

82 As the US representative conceded, paragraph 4 of the redrafted Article I borrowed from the formulations in all three paragraphs of Article I of the 1965 Soviet draft. ENDC/PV. 250, 22 Mar. 1966, p. 11.

83 See Willrich, Non-Proliferation Treaty, p. 83.

to such formations was not considered to constitute proliferation as long as the US maintained its right of veto on their use.

- A situation in which a nuclear-weapon State member of an association of States gave up its entire nuclear arsenal to the association. The association was meant to be of the federal type with the federal authority controlling the weapons. The US representative explained, "since this would not involve any increase in the number of nuclear-weapon Powers, no proliferation would result".⁸⁴

The amended American draft generated a heated controversy between the United States and the Soviet Union and their allies which dominated the debate on non-proliferation in the two sessions held by the ENDC in 1966. The controversy centred around the "control" issue. The arguments of the Soviet Union against the amended draft and the counter-arguments of the United States could be summarized as follows :⁸⁵

- The definition of control was objected to by the Soviet Union on the premises that it would not prohibit the different forms of nuclear sharing within NATO. It would allow a non-nuclear-weapon State to possess physically and legally nuclear weapons and not to be considered a nuclear-weapon State as long as it had no right to use them independently.⁸⁶ The definition would lead to a widening of the circle of Powers which would have physical access to nuclear weapons, or which would have the right to participate in decisions on matters of nuclear strategy, and in decisions concerning the use of

84 ENDC/PV. 250, 22 Mar. 1966, p. 10. For one writer, the intent was clear : to permit the European States at some point to form a nuclear-sharing arrangement into which the US would merge its own nuclear forces. Bader, The United States and the Spread of Nuclear Weapons, p. 59.

85 For a succinct summary, see International Negotiations, pp. 36-41 and 47-50.

86 ENDC/PV. 252, 29 Mar. 1966, p. 7.

nuclear weapons.⁸⁷ The definition was considered to constitute a deviation from a previous US concept of control in the "Baruch Plan" which covered the production, ownership, handling and disposal of atomic materials, atomic energy and atomic weapons.⁸⁸ The "Irish Resolution" was referred to more than once to uphold the Soviet view on the non-transfer of nuclear weapons to an association and indirectly to its members.⁸⁹

The United States thought that the Soviet Union was less than candid in failing to discuss Warsaw Treaty unclear arrangements, although there was evidence to show that Soviet allies were being trained in the use of nuclear weapons.⁹⁰ The United States referred to the complex codes and electronic devices which were developed and applied to prevent an unauthorized use of nuclear weapons. It was also pointed out that allied defence plans would not lead to proliferation, since the participating states would not get their own nuclear weapons or an independent right or ability to fire nuclear weapons. It was argued that the American draft would in fact reinsure the already existing American policy and legislation. As for the Soviet comments on the concept of control in the Baruch plan, they were considered a debater's point which did not advance negotiations.⁹¹

- The right to veto the use of nuclear weapons by the United States was contested by the Soviet Union. The latter raised the following series of questions :

87 ENDC/PV. 255, 5 Apr. 1966, p. 22.

88 ENDC/PV. 260, 28 Apr. 1966, p. 5. For the "Baruch Plan", see US Department of State, Documents on Disarmament, 1945-1959 (Vol. I : 1945-1956) (Pub. No. 7008, Aug. 1960) (Washington, D.C. : US Government Printing Office, 1960), pp. 7-16.

89 ENDC/PV. 269, 30 June 1966, p. 37 and ENDC/PV. 276, 26 July 1966, p. 23.

90 ENDC/PV. 260, 28 Apr. 1966, p. 14 and International Negotiations, p. 39.

91 ENDC/PV. 263, 10 May 1966, pp. 19-20.

"We might, for example, ask what the situation would be if the partners of the United States in NATO were to reject the legality of the United States veto at a decisive or crucial moment ? What would happen if the partners of the United States in NATO were to find means of opening the lock on nuclear weapons in circumvention of the United States veto ? Who would inherit the United States right of veto if NATO ceased to exist ? ...

Can it be seriously suggested that a vital multi-lateral international agreement, to which according to our calculations many States, probably even more than a hundred, could become parties, should be based on the unilateral right of veto of one of the parties to this agreement, the United States ? ...

... Neither the Soviet Union nor the many other States ... can base their security on the United States right of veto on decisions within NATO relating to the use of nuclear weapons."⁹²

The Soviet Union held the view that the veto would not prevent the proliferation of nuclear weapons : "it merely introduces a certain element of restriction on the use of such weapons."⁹³ The Soviet representative maintained that there was no place for the veto right in a non-proliferation treaty because "the treaty should prohibit any transfer by a nuclear Power of nuclear weapons, conditionally or unconditionally, to a non-nuclear State."⁹⁴ If the veto right "appears as an integral part of the treaty, it assumes as a consequence that non-nuclear Powers will get nuclear weapons, will possess them, will control them and will be able to fire them, subject to only one limitation - the right of veto."⁹⁵

The United States explained that American statements on the veto indicated greater control over nuclear weapons and not

92 ENDC/PV. 255, 5 Apr. 1966, pp. 19-20.

93 ENDC/PV. 260, 28 Apr. 1966, p. 7.

94 ENDC/PV. 269, 30 June 1966, p. 34.

95 ENDC/PV. 263, 10 May 1966, p. 25.

proliferation. It was argued that the emphasis not only on the "right" but also on the "ability" to fire nuclear weapons "may answer some of the questions which the Soviet representative put to us ..."⁹⁶ The US representative considered that it was unhelpful for the Soviet Union to argue that it could not base its security on American veto. He noted that "both the Soviet Union and the United States depend for their security on the self-restraint, judgment and wisdom which are brought to bear on the international scene by both sides."⁹⁷

- As the MLF and the ANF projects receded to leave way for the "McNamara Committee", the Soviet Union concentrated its attack on the "European option" which was left open in the re-drafted text. In its view this was an additional loop-hole "which would enable a single nuclear Power to transform itself into an association of nuclear Powers, so that, instead of a single nuclear power, there would emerge two, three or more such Powers."⁹⁸

The United States pointed out that it would require "a very profound change in the political relationships existing between States" for a nuclear-weapon State to give up control of its entire arsenal of nuclear weapons to an association of States. Moreover, it would be quite unlikely to do so if the result would be the domination of the association by another member.⁹⁹ It was also considered "fanciful" to suggest that the "European option" would somehow increase the number of nuclear Powers.¹⁰⁰

As to the non-aligned members of the ENDC, they refrained from indulging themselves too much in that heated and

96 ENDC/PV. 255, 5 Apr. 1966, p. 29.

97 ENDC/PV. 263, 10 May 1966, p. 15.

98 ENDC/PV. 260, 28 Apr. 1966, p. 6. See also ENDC/PV. 267, 23 June 1966, p. 8.

99 ENDC/PV. 253, 31 Mar. 1966, p. 12.

100 ENDC/PV. 268, 28 June 1966, p. 13.

uncompromising debate. With the exception of some general remarks on Articles I and II of the amended American draft¹⁰¹ and without overlooking the possibility that nuclear proliferation could take place within alliances,¹⁰² there was a tendency to leave to the major Powers themselves the task of solving their alliance problems.¹⁰³ This tendency was also prevalent among the members of the First Committee of the UN General Assembly at its 21st Session in 1966.¹⁰⁴

(iii) The Soviet Draft of 24 September 1965 : Article I, paragraph 1 read as follows :

"Parties to the Treaty possessing nuclear weapons undertake not to transfer such weapons in any form - directly or indirectly, through third States or groups of States - to the ownership or control of States or groups of States not possessing nuclear weapons and not to accord to such States or groups or States the right to participate in the ownership, control or use of nuclear weapons.

The said Parties to the Treaty shall not transfer nuclear weapons, or control over them or over their emplacement and use to units of the armed forces or military personnel of States not possessing nuclear weapons, even if such units or personnel are under the command of a military alliance." (Emphasis added.)

Paragraph 2 of the same article contained a prohibition to transmit "any kind ... of information or documentation which can be employed for purposes of ... use of nuclear weapons."

Conversely, Article II, paragraphs 1 and 2 contained similar obligations with regard to the "Parties of the Treaty not

101 See ENDC/PV. 274, 19 July 1966, pp. 6-13 (Mexico).

102 See ENDC/PV. 283, 18 Aug. 1966, pp. 11-12 (Nigeria).

103 See ENDC/PV. 274, 19 July 1966, p. 8 (Mexico); ENDC/PV. 283, 4 Aug. 1966, p. 4 (Sweden); and ENDC/PV. 283, 18 Aug. 1966, pp. 11-12 (Nigeria).

104 For example, see GAOR, 21st Sess., 1st Cttee, 1434th mtg, 28 Oct. 1966, para. 45 (Pakistan) and 1443rd mtg, 7 Nov. 1966, para. 2 (Finland).

possessing nuclear weapons".¹⁰⁵

The Soviet draft also banned direct and indirect transfer of nuclear weapons. The latter form was qualified as being through third States or groups of States.

The transfer prohibited was not only the transfer of nuclear weapons to the ownership or control of States or groups of States not possessing nuclear weapons but also the transfer of nuclear weapons, or control over them or over their emplacement and use, to "units of the armed forces...". Moreover, such States or groups of States were not to be accorded the right to participate in the ownership, control or use of nuclear weapons.

The transfer of nuclear weapons to States "possessing nuclear weapons" was not prohibited as was the case in the two versions of the American draft.

Under the Soviet draft the following NATO nuclear-sharing arrangements would have ceased to apply or would have been prevented :

- Bilateral agreements for cooperation on the use of atomic energy for mutual defence purposes, as they entail training programmes for the armed forces of NATO countries to learn how to operate and maintain US nuclear weapons systems.¹⁰⁶

- The "Agreement Between the Parties of the North Atlantic Treaty for Co-operation Regarding Atomic Information", as it entails, inter alia, the training of personnel in the employment of and defence against atomic weapons and other military applications of atomic energy.¹⁰⁷

¹⁰⁵ See Appendix 3-B.

¹⁰⁶ For a study of these arrangements, see Heymont, loc.cit. and J.H. Smith, loc.cit., pp. 356-357.

¹⁰⁷ The "Agreement" was signed in Paris on 18 June 1964 and entered into force on 12 March 1965. It does not supersede, however, the earlier bilaterals. For the text of the "Agreement", see UNTS, Vol. 542, 1965, pp. 145-160.

- the MLF, the ANF and the "European option" as they would have constituted or led to the creation of "groups of States" not allowed to own or control nuclear weapons.

- the NPG, as it entails consultations on nuclear strategy and on the eventual use of nuclear weapons.¹⁰⁸

The following remarks made by George Ball, the US Under-Secretary of State, in his news conference on 6 July 1966 reflected in a way the US reaction to the Soviet draft and the Soviet attacks on the American draft. He said :

"... we are very determined that we are not going to invite the Soviet Union to sit at the NATO table and determine NATO nuclear policy."¹⁰⁹

On the Conference table, at the ENDC, the US representative explained that :

"There must be ... a measure of consultation in any military alliance ... on the overall strategy or plan of use of all the integrated forces available to the alliance, whether for air defence or other purposes. This consultation must above all seek to achieve an understanding as to the circumstances in which the most devastating of all weapons - that is, nuclear weapons - could be used.

Further, the Soviet Union would apparently prohibit giving non-nuclear weapon States any information which could be employed for the use of nuclear weapons. This would prevent even training the armed forces of non-nuclear weapon States which are members of alliances in the tactical employment of nuclear weapons, or even in defence

The Soviet Union considered the "Agreement" incompatible with the non-proliferation concept. See ENDC/138, 27 July 1964 and ENDC/PV. 207, 13 Aug. 1964.

108 In his Memoirs, President Johnson explained that there were doubts that the US under the Soviet draft "could have carried out even the kind of intensive consultations on nuclear matters within NATO that (it) planned to develop". Johnson, op.cit., p. 477. See also Fisher in Hearings on Arms Control, 1968, p. 90.

109 DOSB, Vol. LV, No. 1413, 23 July 1966, p. 122.

against them, and thus would make it impossible for members of an alliance to operate effectively as a team in their defence."¹¹⁰

The Canadian representative considered the Soviet draft as contrary to principle 5 (balanced measures) of the agreed principles for disarmament negotiations formulated by the US and the Soviet Union in 1961.¹¹¹

While comparing the treaty drafts with each other, the non-aligned members of the ENDC as well as their colleagues in the UN General Assembly rarely took sides with regard to the question of nuclear-sharing arrangements within alliances. For example, on the one hand, the UAR found Article I of the Soviet draft more in line with principle (a) than its American counterpart,¹¹² while, on the other hand, Mexico and Nepal considered that the Soviet draft went too far in its prohibitions.¹¹³ The representative of Nepal to the First Committee of the UN General Assembly was unique in his frankness and awareness of the realities of East-West confrontation in Europe. He said that :

"... the provisions contained in article I of the Soviet draft seemed to be an ideal solution to the problem of proliferation, but they did not take into account the existence of military alliances and the fact that by the very nature of such alliances, strategic readjustments to meet changing defence requirements were inevitable. His delegation was opposed to all military alliances, but so

110 ENDC/PV. 253, 31 Mar. 1966, pp. 14-15. Apparently the United States abstained in the vote on the "Irish Resolution" of 1960 because it called into question the transfer of "information". See Chapter 1.

111 GAOR, 20th Sess., 1st Cttee, 1356th mtg, 19 Oct. 1965, para. 3. For the agreed principles, see note 13 in Chapter 2.

112 ENDC/PV. 245, 3 Mar. 1966. p. 7.

113 ENDC/PV. 274, 19 July 1966, p. 12 (Mexico) and GAOR, 20th Sess., 1st Cttee, 1359th mtg, 22 Oct. 1965, para. 23 (Nepal).

long as they existed each of them would undoubtedly attempt to increase its defence capabilities."¹¹⁴

But besides the question of nuclear sharing, some non-aligned countries had specific remarks to make on Articles I and II of both the American and Soviet drafts. It was noticed that both drafts did not prohibit transfer of nuclear weapons from a nuclear Power to another nuclear Power. India asked for and Cyprus preferred the prohibition of such a transfer.¹¹⁵ Deployment by a nuclear Power of its own weapons on foreign territories, which was not forbidden in either the American or the Soviet drafts so long as the weapons were kept under the nuclear Power's control, was considered, however, a form of proliferation.¹¹⁶ Moreover, it was noticed by Malta that the two drafts did not prohibit transfer to individuals or entities other than States.¹¹⁷ The UAR also pointed out that the effectiveness of a treaty may depend to a large extent on the way it is observed by persons, companies, firms or other private, public or semi-public bodies engaged in nuclear activities. "The activities of such persons or bodies may afford a kind of loop-hole impairing the effectiveness of the treaty." The UAR considered that this question should be studied and the responsibilities of the contracting parties towards their nationals in this field established.¹¹⁸ The UAR also warned against another loop-hole which in its view was not envisaged in the two draft treaties and that was : transfer or assistance resulting from

114 Ibid.

115 ENDC/PV. 263, 10 May 1966, pp. 9-10 (India) and GAOR, 21st Sess., 1st Cttee, 1447th mtg, 9 Nov. 1966, para. 9 (Cyprus).

116 GAOR, 20th Sess., 1st Cttee, 1361st mtg, 25 Oct. 1965, para. 25 (Yugoslavia). See also ENDC/PV. 274, 19 July 1966, pp. 10-11 (Mexico).

117 GAOR, 21st Sess., 1st Cttee, 1434th mtg, 28 Oct. 1966, para. 33.

118 ENDC/PV. 245, 3 Mar. 1966, p. 10.

omission, negligence, carelessness or even accident. It referred to principle (a) which prohibits proliferation in any form.¹¹⁹

(b) The Compromise on Nuclear Sharing and the "European Option"

The previous analysis of the first US and Soviet drafts demonstrates that there were two different approaches to non-proliferation. The one considered that collective ownership of nuclear weapons did not constitute proliferation so long as the right and the ability to use nuclear weapons were not relinquished by a nuclear-weapon State and so long as no increase would have occurred in the number of States and associations of States having the right to independent use of nuclear weapons. The other considered that collective ownership in itself constituted proliferation and that it would have led to further proliferation by way of access to nuclear weapons. Moreover, it considered various aspects of nuclear sharing such as training and consultations on the use of nuclear weapons as other forms of proliferation. Both approaches in fact went beyond the limits of the non-proliferation concept as formulated in the "Irish Resolution".

The formulation of Articles I and II as they appeared in the 24 August 1967 identical treaty drafts, which remained unchanged in the following negotiating phases, were the result of a compromise which was in fact in line with the "Irish Resolution".

The compromise was not reached without difficulty and it appears, as previously mentioned in Chapter 3, that Mr. Gromyko's visit to Washington, D.C. in October 1966 was a turning point.¹²⁰ This visit was preceded by talks in New York between

119 Ibid., p. 7. It is to be noticed, however, that the Soviet draft envisaged the non-transfer of nuclear weapons "in any form".

120 See Hearings on NPT, 1968, p. 179.

Mr. Gromyko and Mr. Rusk which, as President Johnson explained in his memoirs, led the US to conclude that the Soviet Union "might accept a formula allowing the Atlantic allies three things which we considered essential : the existing two-key arrangements, intensive consultation on nuclear matters in the NATO alliance, and preservation of the right of a united Western Europe, if it ever developed, legally to succeed the United Kingdom and France as a nuclear power." President Johnson went on to say that "(i)t was clear, however, that Moscow would oppose any transfer of ownership of nuclear weapons within NATO."¹²¹

The effects of the New York talks and the Washington visit were apparent in the 21st Session of the UN General Assembly where the debates on non-proliferation were very mild with regard to the question of nuclear-sharing arrangements. In the following 1967 sessions of the ENDC this question faded away with the emergence of other serious problems requiring solution.

The ensuing result was the dropping of the multilateral option by the United States. In return, the Soviet Union dropped its insistence on discontinuing the already existing nuclear-sharing arrangements. Adrian Fisher, the Deputy Director of the US Arms Control and Disarmament Agency, explained that it was possible to foreclose the "NATO option" because it was not realistic and that the US "would not accept it and did not intend to exercise it."¹²²

¹²¹ Johnson, op.cit., pp. 477-478. President Johnson explained that the West Germans had insisted that the two-key system and nuclear consultations be protected in any NPT. See also Bunn, "Horizontal Proliferation of Nuclear Weapons", p. 32 and Adrian Fisher in Hearings on Arms Control, 1968, p. 200.

¹²² Ibid.

"Questions on the Draft Non-Proliferation Treaty Asked by US Allies Together with Answers Given by the United States"¹²³ which were attached to the "Letter of Submittal" on the NPT sent to the US President by the Secretary of State, Dean Rusk, on 2 July 1968,¹²⁴ revealed important interpretations of the NPT by the US, especially with regard to alliance relationships and European unity. As previously mentioned, they were shown to the Soviet Union and key members of the ENDC which raised no objection.¹²⁵ The answers, in fact, reflected the compromise reached. They read as follows :

"The treaty deals only with what is prohibited, not with what is permitted.

It prohibits transfer to any recipient whatsoever of 'nuclear weapons' or control over them, meaning bombs and warheads. It also prohibits the transfer of other nuclear explosive devices ...¹²⁶

It does not deal with allied consultations and planning on nuclear defense so long as no transfer of nuclear weapons or control over them results.

It does not deal with arrangements for deployment of nuclear weapons within allied territory as these do not involve any transfer of nuclear weapons or control over them unless and until a decision were made to go to war, at which time the treaty would no longer be controlling.

It does not deal with the problem of European unity, and would not bar succession by a new federated European state to the nuclear status of one of its former components. A new federated European state would have to control all of its external security functions including defense and all foreign policy matters relating to external security, but would not have to be so centralized as to assume all governmental functions. While not dealing with succession by such a federated

123 Hearings on NPT, 1968, pp. 262-263.

124 Ibid., pp. 151-257.

125 See note 28 above.

126 See Section II in this Chapter.

state, the treaty would bar transfer of nuclear weapons (including ownership) or control over them to any recipient, including a multilateral entity."¹²⁷

These interpretations shed light on certain implications of Articles I and II. For a fuller understanding of these implications as well as others, the analysis of both articles, after this inevitable survey of their legislative history, can now be easily undertaken.

(c) Non-Transfer and Non Receipt : Final Analysis

Articles I and II were drafted in a much simpler language when compared with the previous drafts. The transfer of nuclear weapons or other nuclear explosive devices was prohibited to "any recipient whatsoever". As one representative pointed out, the prohibitive sense of the words "any", "whatsoever" and "otherwise" allows no exception.¹²⁸ The transfer is prohibited whether "directly, or indirectly" without any qualification or definition. "Control" was not defined and was not even qualified as being "national control" as was the case in the American draft or as "control of States or groups of States" as was the case in the Soviet draft. It is on the basis of the previous terms that we undertake our final analysis as to non-transfer and non-receipt.

(i) Any Recipient Whatsoever / Any Transferer Whatsoever : The terms are quite simple and categorical so as to preclude any transfer or receipt of nuclear weapons or explosive devices or control over them whether to or from Parties to the NPT, or not. Transfer and receipt are therefore not permitted to or by individual States, groups of States or physical and legal persons.

Transfer and receipt are prohibited between nuclear-weapon States, which was not the case in both the American and Soviet

¹²⁷ Hearings on NPT, 1968, pp. 262-263.

¹²⁸ ENDC/PV. 326, 29 Aug. 1967, para. 6 (Poland).

drafts and which was also not envisaged in the "Irish Resolution". The United States, for example, cannot transfer nuclear weapons to the United Kingdom.¹²⁹ However, the Nassau agreement of December 1962 whereby the United States undertook to make available on a continuing basis Polaris missiles to the United Kingdom is not incompatible with the NPT as long as the transfer of missiles does not involve warheads.¹³⁰

Transfer and receipt are also prohibited to or from groups of States so as to preclude the establishment of multilateral nuclear entities such as a multilateral nuclear force.¹³¹

The NPT was also interpreted as prohibiting the transfer of nuclear weapons to a UN peace-keeping force established in accordance with Articles 43, 44 and 45 of the UN Charter.¹³² Apparently, Article I was very carefully drafted so as to preclude a nuclear-armed UN force.¹³³ As Mason Willrich notes, "this issue has theoretical interest in relation to plans for general and complete disarmament. The question of whether the possibility should be left open of providing a United Nations Peace Force with nuclear weapons in the later stages of a comprehensive disarmament plan was hotly debated at the ENDC in 1962. The United States wished to leave such a possibility open to ensure that, when disarmament was complete, the Peace Force would have sufficient armament 'so that no state could challenge it'. The Soviet Union wanted any such possibility closed."¹³⁴

129 For example, see US Deputy Secretary of Defence Paul Nitze's statement in Hearings on NPT, 1968, p. 89.

130 See Section I of Chapter 4.

131 Adrian Fisher in Hearings on Arms Control, 1968, p. 205.

132 Paul Nitze in Hearings on NPT, 1968, p. 88. See also Gerard Smith and Adrian Fisher in Hearings on Military Implications of NPT, pp. 132-133.

133 Elizabeth Young, A Farewell to Arms Control ? (London : Penguin Books, 1972), p. 114.

134 Willrich, Non-Proliferation Treaty, p. 85.

The complete prohibition or transfer of "other nuclear explosive devices" would also preclude their transfer to international organizations such as the International Atomic Energy Agency in Vienna (IAEA). As will be shown later, this interpretation does not contradict Article V of the NPT, which provides that potential benefits from peaceful applications of nuclear explosions will be made available to non-nuclear-weapon States "pursuant to a special international agreement or agreements, through an appropriate international body ..." (emphasis added.) The "Agency" would be a link between the nuclear-weapon States and the non-nuclear-weapon States in establishing, for example, international standards for the performance of the services rendered and in performing administrative functions in this field.¹³⁵ But under no circumstances could the IAEA own or apply with its own means nuclear explosive devices for peaceful purposes.

(ii) Direct and Indirect transfer : Direct transfer of nuclear weapons or other explosive devices needs no explanation. As far as indirect transfer is concerned, the legislative history of Articles I and II is indicative of the different qualifications which were attached to it. As the term "indirect" was not explicitly defined since the submission of the first identical treaty drafts of 24 August 1967, one country, Switzerland, undertook to define it in its "Aide-Mémoire" presented on 17 November 1967 to the Co-Chairmen of the ENDC. It states :

"The Swiss authorities consider that the term 'indirect' concerns the supply of arms, explosives or technical assistance for military purposes through the agency of a third State whether a Party to the treaty or not."¹³⁶

135 See Firmage, loc.cit., pp. 722-723. See Chapter 7 of this study.

136 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 21 (ENDC/204, 24 Nov. 1967).

It was later explained in 1969 by Gerard Smith, the Director of the US ACDA, that :

"The words 'directly or indirectly' were used, as in many US laws, to prevent evasion of the prohibitions of the treaty by indirect means - such as a transfer of a nuclear weapon through an intermediary which was not party to the treaty. Such an indirect transfer would be prohibited by our own atomic energy legislation."¹³⁷

Some worries were expressed in the American debate that the Soviets at some future date would interpret the term "indirectly", as they did before, to mean participation in nuclear decisions such as in NATO. It was pointed out that the Soviets were aware of US interpretations with respect to participation in NATO nuclear decisions and they had not objected to them.¹³⁸

In the last analysis, it could be construed from reading the term "indirectly" in close conjunction with the terms "any recipient whatsoever" and "any transferer whatsoever" that the prohibited indirect transfer would not only be through "third States", whether parties to the Treaty or not, but also through individuals, physical or legal, or international organizations which by definition are not Parties to the Treaty which is concluded only among States.

Before turning to the term "control", it is worth noting that the UAR submitted an official amendment to Article I to add the words "in any form whatsoever" after the words "any recipient whatsoever".¹³⁹ The UAR representative explained that transfer might take a great variety of forms. "It may be gratuitous, in the form of a gift, or may be made against payment. It may result in full ownership or perhaps in only certain

137 Hearings on Military Implications of NPT, p. 122.

138 Ibid.

139 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 13 (ENDC/197, 26 Sept. 1967).

attributes of ownership, it may be definitive or temporary..."¹⁴⁰ He referred to principle (a) of resolution 2028(XX) which stated explicitly that nuclear weapons should not be proliferated "directly or indirectly ... in any form".¹⁴¹ Both the Soviet and American representatives defended Articles I and II as foreclosing nuclear proliferation in any form.¹⁴² The addition of the words "in any form whatsoever" was not considered as strengthening Article I, which "is already free of loopholes."¹⁴³

(iii) Control : Before formulating a final definition of "control" in the context of the NPT, let us in the first place examine closely the last three answers given by the United States to its allies quoted above and which relate to consultations and planning on nuclear defence, deployment of nuclear weapons within allied territory and European unity. Control is a common denominator of all three.

- Consultations and Planning on Nuclear Defence : The US contention that the NPT does not deal with allied consultations and planning on nuclear defense seems to be plausible for the following reasons :

The prohibition contained in paragraph 2 of Article I of the Soviet treaty draft of 24 September 1965 on transmitting information or documentation on the use of nuclear weapons did

¹⁴⁰ ENDC/PV. 333, 26 Sept. 1967, para. 10. One writer mentioned outright gift as one way to disseminate nuclear weapons by nuclear Powers. Robert R. Ranger, "Death of a Treaty : A Diplomatic Obituary ?", International Relations, Vol. III, No. 7, Apr. 1969, p. 484.

¹⁴¹ ENDC/PV. 340, 19 Oct. 1967, para. 13. The UAR Representative had previously referred to the words "any form" in principle (a) with respect to "omission, negligence, carelessness". See note 119 above.

¹⁴² ENDC/PV. 370, 27 Feb. 1968, para. 56 (USSR) and para. 79 (United States).

¹⁴³ Ibid., para. 79 (United States).

not reappear in the Treaty. The Soviet draft would have deprived non-nuclear-weapon States from any information concerning nuclear strategy or the technical use of nuclear weapons deployed on their own territory.

Moreover, the Nuclear Planning Group in NATO, which is considered to be the centre ring in the Alliance for consultations and planning on nuclear strategy, is not entitled to receive the transfer of nuclear weapons.¹⁴⁴ Its compositions and functions seem not to be incompatible with the provisions of the NPT.¹⁴⁵ Consultations and planning on nuclear strategy whether within or outside the NPG, or in the Warsaw Pact set up, are not incompatible with the NPT so long as no transfer of nuclear weapons or control over them occurs.

- Deployment of Nuclear Weapons within Allied Territory : The Treaty, in fact, does not deal with common arrangements for deployment of nuclear weapons within allied territory. As previously mentioned, deployment was not prohibited in any of the previous drafts.

The Soviet Union did not object to the interpretation given by the United States in answer to its allies. Apparently the Soviets did not indicate acquiescence or agreement because "(t)hey can't be asked to agree about certain arrangements that (the US) keep secret."¹⁴⁶

Allowing deployment under the NPT was objected to by a number of non-aligned countries. It was regretted that no attempt was made to deal with the transfer of nuclear weapons

144 For an interesting assessment of a possible future role of the NPG, see Willrich, Non-Proliferation Treaty, pp. 79-81.

145 See Adrian Fisher in Hearings on Arms Control, 1968, p. 90; Paul Nitze in Hearings on NPT, 1968, p. 56; and Adrian Fisher in Hearings on NPT, 1969, p. 358.

146 Adrian Fisher in Hearings on NPT, 1969, p. 364.

to and their stationing in the territories of other countries, or with that of the training of the armed personnel of non-nuclear nations in the use of nuclear weapons. This was considered to represent one of the important features of the problem of dissemination.¹⁴⁷ It was considered that one of the weaknesses of the NPT was that it did not prohibit storing and transporting nuclear weapons within the territories of non-nuclear-weapon States as well as overflying those territories by bomb-carrying aircraft of nuclear-weapon States.¹⁴⁸ A question was raised on how to guarantee that non-nuclear-weapon States would not have access to the weapons deployed on their territory.¹⁴⁹ There was doubt that deployment of nuclear weapons within NATO was compatible with non-proliferation.¹⁵⁰ Deployment was considered by one country as against the spirit of the NPT and the 1964 Declaration of the Cairo Conference of Non-Aligned Countries.¹⁵¹ One country considered that the stationing of nuclear weapons in the territories of non-nuclear-weapon States constituted a loop-hole. It was of the opinion that the area of any non-nuclear-weapon State should automatically become nuclear free.¹⁵²

The implications with respect to the deployment of nuclear weapons not prohibited under the NPT are manifold. Within the NATO Alliance, the modernization of the long-range theatre nuclear force is quite compatible with the NPT, such as the decision to deploy in Europe US ground-launched systems comprising 108 Pershing-2 and 464 ground-launched cruise missiles

147 ENDC/PV. 334, 28 Sept. 1967, para. 27 (India). See also A/C.1/PV. 1567 (prov.), 14 May 1968, pp. 63-65 (India).

148 A/CONF. 35/SR.15, 13 Sept. 1968, p. 202 (Mauritius).

149 A/C.1/PV. 1571 (prov.), 20 May 1968, p. 31 (Algeria).

150 A/C.1/PV. 1570 (prov.), 17 May 1968, p. 27 (Tanzania).

151 A/CONF. 35/SR.7, 9 Sept. 1968, p. 86 (Ceylon). For the relevant part in the Cairo Declaration, see UN Doc. A/5763, 29 Oct. 1964, p. 22.

152 A/C.1/PV. 1566 (prov.), 13 May 1966, p. 27 (Uganda).

all with single warheads, a decision which was taken on 12 December 1979 at a Special Meeting of Foreign and Defense Ministers of NATO in Brussels.¹⁵³ Moreover, the armed forces of the allies would continue to receive training programs on how to operate and maintain US nuclear weapons systems so long as no transfer of nuclear weapons or control over them results. The 1964 "Agreement... for Cooperation Regarding Atomic Information" would apparently not be affected by the NPT as it entails, inter alia, training on use and defense against atomic weapons.¹⁵⁴

Similar arrangements between the members of the Warsaw Pact which have certain reciprocal relations with the Soviet Union would also be permitted to continue under the NPT.¹⁵⁵

A US official in an answer to a question as to whether the NPT prohibited the Soviet Union from placing nuclear weapons in Cuba said that "as long as the Soviets maintained control over their weapons, didn't transfer the weapons or control over them to any country, this treaty would not prohibit it".¹⁵⁶ However, he went on to say that the US would regard the presence of Soviet missiles in Cuba on a different basis. He assumed that the US would react the same way as it did in 1962.¹⁵⁷

The question also arises with respect to the two-key system as to whether a US ally on whose territory American nuclear

153 For the Text of the Joint Communiqué of the NATO meeting, see US Department of State, Bureau of Public Affairs, Current Policy, No. 122.

154 One writer concludes that the 1964 NATO Agreement is overly broad and is inconsistent with the NPT. He contends that the 'Agreement' could be of material assistance to a nation willing to break its undertaking not to produce nuclear weapons. J.H. Smith, loc.cit., p. 370.

155 ENDC/PV. 263, 10 May 1966, p. 26 (USSR). Nuclear-sharing arrangements in the context of the Warsaw Pact were not an issue in the formulation of Articles I and II of the NPT.

156 Adrian Fisher in Hearings on Arms Control, 1968, p. 89.

157 Ibid.

weapons are deployed would continue to enjoy the right to veto their use. Would this veto mean that the non-nuclear-weapon State has control over the weapons which is prohibited under the NPT ? It seems that the veto right would be unhampered on several grounds. Veto on firing the weapons is not the affirmative and final decision-making power; it is an additional safeguard against the use of the weapons; and it is after all an attribute of territorial sovereignty.¹⁵⁸

If, under the two-key system, a decision was made by the US and the allied host countries to use nuclear weapons, the release of the weapons to the allies would in all probability lead to the end of the NPT. But as this eventuality is closely related to the more general question raised by the United States in its answers to its Allies as to the effect of war on the Treaty, the discussion of this aspect is dealt with in Part V of this study in conjunction with the Treaty's adaptability to changing circumstances.

It remains to be said that the deployment of nuclear weapons permitted under the NPT is restricted by other international legal instruments. They are the following :¹⁵⁹

- The Antarctic Treaty : This Treaty, which was signed in Washington, D.C. on 1 December 1959, stipulates in paragraph 1 of its first article that : "Antarctica shall be used for peaceful purposes only. There shall be prohibited, inter alia, any measures of a military nature, such as the establishment of military bases and fortifications, the carrying out of military manoeuvres, as well as the testing of any type of weapons." Article V prohibits also "any nuclear explosions".¹⁶⁰

158 See Hearings on NPT, 1969, pp. 357-358 and Bunn, "Horizontal Proliferation of Nuclear Weapons", p. 34.

159 For a brief analysis of the following instruments, see Eric Stein, "Legal Restraints in Modern Arms Control Agreements", American Journal of International Law, Vol. 66, No. 2, Apr. 1972, pp. 255-289.

160 The United Nations and Disarmament : 1946-1970, p. 441.

- The Test-Ban Treaty of 1963: Article I of the Treaty prohibits the Parties carrying out any nuclear weapon test explosions, or any other nuclear explosion, at any place under their jurisdiction or control in the atmosphere, beyond its limits, including outer space; or under water, including territorial waters or high seas. Underground nuclear weapon testing or explosions are allowed provided that no radioactive debris are present outside the territorial limits of the State under whose jurisdiction or control such explosions are conducted. However, they are subjected to certain restrictions under the Treaty on the Limitation of Underground Nuclear Weapon Tests, the so-called "Threshold Test Ban Treaty," and the Treaty on Underground Nuclear Explosions for Peaceful Purposes, signed between the United States and the Soviet Union in Moscow on 3 July 1974 and, in both Washington and Moscow on 28 May 1976 respectively. Both instruments will be dealt with later.¹⁶¹

- The Outer Space Treaty : The Treaty, which was open for signature in London, Moscow and Washington on 27 January 1967, stipulates in its Article IV the following :

"States Parties to the Treaty undertake not to place in orbit around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner.

The moon and other celestial bodies shall be used by all States Parties to the Treaty exclusively for peaceful purposes. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on celestial bodies shall be forbidden ..."¹⁶²

- The Treaty of Tlatelolco : Article I of the Treaty

161 See Appendices 6, 14 and 18.

162 See Appendix 7. Moreover, a draft agreement worked out by the UN Committee on the Peaceful Uses of Outer Space Governing the Activities of States on the Moon and Other Celestial Bodies includes similar provisions. See UN Doc. A/RES/34/68, 14 Dec. 1979, Annex.

prohibits and prevents the Contracting Parties from permitting in their territories "the receipt, storage, installation, deployment and any form of possession of any nuclear weapons."¹⁶³ States outside the Treaty's zone of application are called upon, by virtue of Additional Protocol I, to undertake, inter alia, the same obligations with respect to their territories within the zone. Moreover, this is also the case in Additional Protocol II which is addressed to the nuclear-weapon States who are called upon, inter-alia, not to use or threaten to use nuclear weapons against the Contracting Parties.

Although the prohibition in Article I as well as in the corresponding obligations in Additional Protocols I and II appears to be comprehensive, an official interpretation of the Final Act of the Fourth Session of the Preparatory Commission for the Denuclearization of Latin America specified that transit of nuclear weapons by non-Contracting Parties was neither addressed in nor affected by Article I of the Treaty.¹⁶⁴

Permitting the transit of nuclear weapons is one reason, besides that pertaining to peaceful nuclear explosions referred to above, why the Soviet Union had been reluctant to adhere to Additional Protocol II. Transit, in its view, provides an "obvious loop-hole" for violation of the rules governing the nuclear-weapon free zone. As the Soviet representative to the CCD put it:

"The transit of nuclear weapons through that zone could serve as a screen for the development as well as for the use of nuclear weapons from the territory of the ... zone."¹⁶⁵

¹⁶³ See Appendix 8.

¹⁶⁴ See Robinson, loc.cit., pp. 286 and 301-302. Robinson points out that the term 'transit' should be distinguished from deployment which is more stationary and permanent in character (p. 301).

¹⁶⁵ CCD/PV. 553, 28 Mar. 1972, p. 36.

In the statement made by the Soviet Union upon signing and ratifying Additional Protocol II, the Soviet Union reaffirmed its position that authorizing the transit of nuclear weapons in any form would be contrary to the objectives of the Treaty of Tlatelolco and incompatible with the non-nuclear status of the States Parties to the Treaty and with their obligations as laid down in Article 1 thereof.¹⁶⁶

- The Sea-Bed Treaty: The Treaty, which was opened for signature in London, Moscow and Washington on 11 February 1971, stipulates in paragraphs 1 and 2 of Article I the following:

1. The States Parties to this Treaty undertake not to implant or emplace on the sea-bed and the ocean floor and in the subsoil thereof beyond the outer limit of a sea-bed zone, as defined in Article II, any nuclear weapons or any other types of weapons of mass destruction as well as structures, launching installations or any other facilities specifically designed for storing, testing or using such weapons.

2. The undertaking of paragraph 1 of this article shall also apply to the sea-bed zone referred to in the same paragraph, except that within such sea-bed zone, they shall not apply either to the coastal State or to the sea-bed beneath its territorial waters."¹⁶⁷

Lastly, at the initiative of the Soviet Union and its allies, the UN General Assembly at its 33rd session in 1978 adopted a resolution calling upon all nuclear-weapon States and non-nuclear weapon States to refrain from stationing nuclear weapons in territories where there are no such weapons at present. The Assembly at its 34th Session in 1979 raised the possibility of concluding an international agreement in this respect.¹⁶⁸

But as far as existing nuclear weapons in the territories of States allied to one of the two super-Powers, it should be

¹⁶⁶ SIPRI Year Book 1979, p. 619.

¹⁶⁷ See Appendix 10.

¹⁶⁸ GA Res. 33/91 F, 16 Dec. 1978 in GAOR, 33rd Sess., Suppl. No. 45(A/33/45), pp. 61-62 and UN Doc. A/RES/34/87C, 17 Jan. 1980.

pointed out that at the 1975 NPT Review Conference, a number of non-nuclear-weapon States proposed to limit and ultimately withdraw from the territories of non-nuclear-weapon States Party to the NPT of all nuclear-weapon delivery systems, especially tactical nuclear weapons. The Soviet Union then considered that the proposal fell outside the purview of the Review Conference and as counter productive with regard to ongoing East-West negotiations.

- European Unity : The answer given by the United States to its allies on the compatibility of the succession by a new federated European State to the nuclear-weapon status of one of its former components with the NPT seems to be well founded, provided that the new federated state would control all of its external security functions including defence. In the case of such form of unity, the newly established State succeeds to the nuclear status of the nuclear State or States which join the Union; no transfer takes place. The United States' interpretative answer was not challenged even when the Soviet instrument of ratification was being signed at the meeting held on 24 November 1969 by the Presidium of the Supreme Soviet of the USSR. Mr. Gromyko, the Minister of Foreign Affairs, spoke then of the prohibited transfer of nuclear weapons to separate States and to any group of States.¹⁶⁹

It would be absurd, as one writer notes, to pretend that the Treaty had fixed forever the structure of States and thus blocked the historical evolution of certain countries towards unification. It would not be possible, on purely legal grounds, to suggest that the Treaty prohibits political unification.¹⁷⁰

On this latter point, it is quite significant that both the

¹⁶⁹ New Times, No. 48, 3 Dec. 1969, p. 27.

¹⁷⁰ See Emmanuel J. Roucounas, "L'équilibre entre la non prolifération des armes nucléaires, la prolifération des connaissances nucléaires 'civiles' et les garanties de sécurité nucléaire", Revue Hellénique de Droit International, 21e Année, Nos. 1-4, Janv.-Dec. 1968, pp. 147-148.

Italian and German Governments, later, in their notes to the Depositary Governments upon their signature of the NPT on 28 January 1969 and 28 November 1969 respectively, said that they were signing the Treaty on the understanding that it did not hamper European unification.¹⁷¹

It would be right to assume that all possible forms of political unity between nuclear-weapon States and non-nuclear-weapon States are possible provided that the new State would have full control of its defence and foreign affairs. In Europe, for example, if the members of the EEC succeed in achieving a politically united Europe, the new State would succeed to the nuclear status of both France and the United Kingdom. The latter States could also merge to constitute a more powerful nuclear-weapon State;¹⁷² but in this case too the new State would have to control its defence apparatus. It should be remembered that the transfer of nuclear weapons or control over them are prohibited between two nuclear-weapon States. A merger between a nuclear-weapon State and non-nuclear-weapon State would also be possible.¹⁷³

To conclude the discussion of this aspect on European control of nuclear weapons it should be noted that both France and the United Kingdom hold the view that political unity is a prerequisite for close nuclear defence co-operation.¹⁷⁴

At this stage, it is possible to provide a comprehensive definition as to what is meant by non-transfer of control over

171 Assembly of Western European Union, Proceedings, 15th Sess., Part 2, III, Dec. 1969, Doc. 499, Appendix II, p. 221 (Italy) and pp. 223 and 225 (FRG).

172 On the complementarity of French and British Nuclear forces, see Ian Smart, "Future Conditional. The Prospect for Anglo-French Nuclear Co-operation", Institute for Strategic Studies (London), Adelphi Papers, No. 78, Aug. 1971.

173 Adrian Fisher in Hearings on NPT, 1969, p. 356.

174 See Smart, "Future Conditional. The Prospect for Anglo-French Nuclear Cooperation", pp. 22-31.

nuclear weapons in the context of the NPT. It means, as Professor Eric Stein puts it, that nuclear-weapon States cannot give up physical custody of their nuclear weapons (or other nuclear explosive devices) or provide sufficient access to them so that they could be taken away by anyone else; nor can the nuclear-weapon States give up their power to make the final decision on firing their nuclear weapons.¹⁷⁵

2. Manufacture

The NPT prohibits only the non-nuclear-weapon States from manufacturing nuclear weapons or other nuclear explosive devices. It neither imposes a freeze on the production of nuclear weapons by the nuclear-weapon States, nor prescribes the destruction of their existing stockpiles.

The prohibition on manufacture was envisaged in all the previous treaty drafts. The Soviet draft of 24 September 1965 also envisaged the undertaking by the States "not possessing nuclear weapons" not to "prepare for the manufacture" of nuclear weapons. The American draft as amended on 21 March 1966 included the preparations for the manufacture but only with respect to the prohibition on assistance. This means that non-nuclear-weapon States would have been allowed, under the American draft, to prepare for the manufacture of nuclear weapons as long as no assistance was provided from outside. Another difference between the above-mentioned American and Soviet drafts was that the latter specified that the manufacture or the preparation for manufacture of nuclear weapons was prohibited whether they were undertaken "independently or together with other States, in their own territory or in the territory of other States." It seems that the Soviet drafters had the Federal Republic of Germany in mind which undertook in 1954

175 Stein, "Legal Restraints in Modern Arms Control Agreements", p. 275.

not to manufacture in its territory any atomic weapons, as part of the arrangements for its accession to NATO.¹⁷⁶

But what do we understand by "manufacture" as prohibited by the NPT ? The representative of Sweden to the ENDC raised the question with respect to the use of the phrase "prepare for manufacture". Mrs. Myrdal, while agreeing that it was important to block the road to nuclear weapon development as early as possible, noticed that manufacture was a long ladder with many rungs and asked "on which of these 'rungs' is it reasonable and feasible to introduce the international blocking ?"¹⁷⁷ She went on to say the following :

"To prohibit just the final act of 'manufacture' would seem to come late in these long chains of decisions. On the other hand, already to probe the preliminary thinking of politicians and the laboratory research of scientists obviously is as difficult, as it would be considered undesirable intervention. Could a middle link be found on which the prohibitory regulation should most definitely be focused ?"¹⁷⁸

The Swiss Government in its "Aide-Mémoire" presented on 17 November 1967 to the Co-Chairmen of the ENDC interpreted the phrase "to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices" as not covering "exploitation of uranium deposits, enrichment of uranium, extraction of plutonium from nuclear fuels, or manufacture of fuel elements or heavy water, when these processes are carried out for civil purposes."¹⁷⁹ The Swiss authorities noted that such an interpretation could be confirmed by the co-authors.

¹⁷⁶ See note 46 in Chapter 1.

¹⁷⁷ ENDC/PV. 243, 24 Feb. 1968, p. 11.

¹⁷⁸ Ibid., p. 12.

¹⁷⁹ DCOR, Suppl. for 1967 and 1968, Docs. DG/230 and Add. 1, Ann. IV, Sec. 21 (ENDC/204, 27 Nov. 1967). Japan considered that fast critical assemblies, reactor excursion experiment facilities, and thermonuclear fusion reactors should not come under the prohibitions of the NPT. A/C.1/PV. 1565 (prov.), 10 May 1968, p. 37.

The United States believed that it was not possible at that time to formulate a comprehensive definition or interpretation of what would constitute "manufacture" under Article II of the NPT. Moreover, it made some general observations as to whether or not a specific activity constitutes prohibited manufacture under the NPT, as follows :

"For example, facts indicating that the purpose of a particular activity was the acquisition of a nuclear explosive device would tend to show non-compliance. (Thus, the construction of an experimental prototype nuclear explosive device would be covered by the term 'manufacture' as would be the production of components which would only have relevance to a nuclear explosive device.) Again, while the placing of a particular activity under safeguards would not, in and of itself, settle the question of whether that activity was in compliance with the treaty, it would of course be helpful in allaying any suspicion of non-compliance.

It may be useful to point out, for illustrative purposes, several activities which the United States would not consider per se to be violations of the prohibitions in Article II. Neither uranium enrichment nor the stockpiling of fissionable material in connection with a peaceful program would violate Article II so long as these activities were safeguarded under Article III. Also clearly permitted would be the development, under safeguards, of plutonium fueled power reactors, including research on the properties of metallic plutonium, nor would Article II interfere with the development or use of fast breeder reactors under safeguards."¹⁸⁰

It can be deduced from the above that the application of safeguards required by Article III of the NPT would help to clarify the situation with respect to the manufacture of nuclear weapons.

The prohibition of manufacture which is limited to non-nuclear-weapon States raised considerable discontent and resist-

180 Extension of remarks by William Foster in response to questions regarding nuclear explosive devices in Hearings on NPT, 1968, p. 39.

ence among some non-aligned members of the ENDC as well as other members of the United Nations. It was shown in Chapter 2 that the two joint memoranda of 1965 and 1966 submitted to the ENDC by the eight non-aligned members were carefully drafted in order to strike a balance between those who were advocating that a non-proliferation treaty should be coupled at the same time with other measures or that they should be embodied in a treaty as part of its provisions, and those who were hoping that this would materialize, but who felt, however, that a NPT should at least be followed by tangible steps.¹⁸¹

India led the campaign against the continued manufacture of nuclear weapons by the nuclear-weapon States, i.e., the vertical proliferation or what was sometimes called by India further proliferation or intra-spatial proliferation.¹⁸² India argued that the real problem was the existence of vertical proliferation. As explained by its representative in the ENDC, "(f)uture or horizontal or extra-spatial proliferation is only the consequence and not the cause of the present armaments tension in the world. Once the cause is remedied, the consequence is automatically eliminated".¹⁸³ He further argued that principle (a) of resolution 2028(XX) forbade not only non-nuclear Powers but also nuclear Powers to proliferate. "It says so specifically and categorically. It does not say that the non-nuclear Powers shall not proliferate but the nuclear Powers may proliferate and the nuclear Powers will agree only not to disseminate weapons and weapons technology. It says that nei-

181 See principle (b) in Chapter 2.

182 From the numerous statements made by India on this aspect, see GAOR, 20th Sess., 1st Cttee, 1363rd mtg, 26 Oct. 1965, paras. 1-10; ENDC/PV. 240, 13 Feb. 1966, pp. 16-17; ENDC/PV. 263, 10 May 1966, pp. 4-13 (especially p. 11); ENDC/PV. 370, 27 Feb. 1968, para. 13; and A/C.1/PV. 1567 (prov.), 14 May 1968, p. 66. See also V.C. Trivedi, "Vertical Versus Horizontal Proliferation : An Indian view" in Dougherty and Lehman, Jr., op.cit., pp. 195-203.

183 Trivedi, loc.cit., p. 197.

ther shall proliferate."¹⁸⁴ Reference was made to the report of the UN Secretary-General on the "Effects of the Possible Use of Nuclear Weapons ...", which considered that any further elaboration of existing nuclear arsenals would lead to greater tension and greater instability in the world at large.¹⁸⁵ At a certain stage in the negotiations India suggested that the production of nuclear weapons be prohibited in a first article of a non-proliferation treaty. As to the dissemination problem (horizontal proliferation) and reduction of stockpiles, it was suggested that they be treated in articles 2 and 3 respectively.¹⁸⁶

On the basis of principle (a), Brazil also criticised the continuation of vertical proliferation allowed under the NPT.¹⁸⁷ Sweden too was very critical of the non-prohibition on manufacture with respect to nuclear Powers but was less intransigent in its position than India and Brazil. Sweden tried to improve the treaty drafts, as will be shown later, in order to draw concessions from the two co-authors with regard to their obligations relating to disarmament and, more particularly, nuclear disarmament.¹⁸⁸

At the 22nd resumed session of the UN General Assembly in 1968 a number of countries considered that the exemption of the nuclear-weapon States from the prohibition on manufacture of nuclear weapons constituted a loop-hole in the meaning of principle (a).¹⁸⁹

184 ENDC/PV. 240, 15 Feb. 1966, pp. 16-17.

185 ENDC/PV. 270, 27 Feb. 1968, para. 13. For the relevant part of the UN Secretary-General's report, see Effects of the Possible Use of Nuclear Weapons, para. 82.

186 ENDC/PV. 263, 10 May 1966, p. 11.

187 ENDC/PV. 363, 8 Feb. 1968, para. 39.

188 See Chapter 9.

189 For example, see A/C.1/PV. 1566 (prov.), 13 May 1968, p. 47 (Cuba); A/C.1/PV. 1568 (prov.), 15 May 1968, p. 41 (Dahomey); and A/C.1/PV. 1573, 23 May 1968, para. 63

Since the presentation of their identical treaty drafts of 24 August 1967, both the United States and the Soviet Union insisted that their drafts were void of any loop-holes. As the United States representative to the ENDC put it, "no amount of argumentation about so-called 'vertical non-proliferation' - that is, halting the nuclear arms race - can hide that fact."¹⁹⁰ Moreover, they both indicated that the conclusion of the NPT should not be delayed until agreement was reached on certain measures of nuclear disarmament.¹⁹¹

Before turning to the following section, we should point out that a literal interpretation of the phrase "to proliferate" in principle (a) may lead to the conclusion that vertical non-proliferation of nuclear weapons by the nuclear-weapon States can be deduced from the text. Moreover, the two co-authors, in defending the lack of prohibition on manufacture with regard to the nuclear-weapon States, did not really contest the concept of vertical proliferation. They rather raised the question of the time and effort needed to reach agreements on other measures related to nuclear-weapon States' activities in the nuclear-weaponry field. In their view, a non-proliferation treaty should not wait for such measures lest the problem of nuclear proliferation should become more dangerous.

However, it must be said that the Treaty as it finally materialised is in concert with the non-proliferation concept as formulated in the "Irish Resolution", which had envisaged that only "States not possessing nuclear weapons would undertake not to manufacture or otherwise acquire control of (nuclear) weapons." Without underestimating the difficulties involved,

(Jordan). The title of the NPT was also considered misleading as the Treaty dealt with non-dissemination only. A/C.1/PV. 1563 (prov.), 8 May 1968, p. 21 (Malaysia).

190 ENDC/PV. 330, 14 Sept. 1967, para. 5.

191 For example, see ENDC/PV. 369, 22 Feb. 1968, para. 50 (United States).

it would have been a considerable step forward if the NPT would have gone further than the "Irish Resolution" in extending the prohibition on manufacture to the nuclear-weapon States as it did with respect to the prohibition on the transfer of nuclear weapons between nuclear-weapon States, which was not the case in the "Irish Resolution".

3. Assistance, Encouragement or Inducement

On the one hand, Article I imposes on nuclear-weapon States, "not in any way to assist, encourage or induce any non-nuclear weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices". On the other hand, by virtue of Article II, non-nuclear-weapon States undertake "not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices."¹⁹²

In analysing those provisions, we have to distinguish between four kinds of relationships. First, assistance, encouragement or inducement from nuclear-weapon States to non-nuclear-weapon States which are prohibited by both Articles I and II, the latter having prohibited the non-nuclear-weapon States from seeking or receiving any assistance. Second, assistance from a nuclear-weapon State to another nuclear-weapon State which is not prohibited under the NPT. Third, assistance from non-nuclear-weapon States to nuclear-weapon States which seems to be allowed. And finally the controversial issue of assistance from non-nuclear-weapon States to non-nuclear-weapon States which literally could be considered not prohibited if the State seeking or receiving the assistance is not a Party to the Treaty as Article II prohibits the Parties not to seek or receive any assistance.

¹⁹² See Appendix 3-G.

¹⁹³ Appendices 3-A, B and C.

(a) Assistance, Encouragement or Inducement from Nuclear-Weapon States to Non-Nuclear-Weapon States

The first American Treaty draft of 17 August 1965 prohibited assistance from "Nuclear States" to "Non-Nuclear States". It also prohibited the latter from seeking or receiving assistance. Encouragement and inducement were added by the American amendments of 21 March 1966. Those amendments as well as the Soviet draft of 24 September 1965 also prohibited assistance in the preparations for manufacture or in the testing of nuclear weapons.¹⁹³ The latter prohibitions are not included in final treaty text. In view of the absence of prohibition on assistance in the preparations for manufacture, it is possible to conclude that the non-nuclear-weapon States could seek or receive assistance from nuclear-weapon States with respect to those activities which do not constitute or involve the manufacture of nuclear weapons or other nuclear explosive devices as demonstrated above. As to assistance, encouragement or inducement with respect to the testing of nuclear weapons, it is to be noted that such prohibition on encouragement or inducement already exists in the Moscow Test Ban Treaty in which the words encouragement and inducement have their origin in paragraph 2 of Article I which reads as follows :

"Each of the Parties to this Treaty undertakes ... to refrain from causing, encouraging, or in any way participating in, the carrying out of any nuclear-weapon test explosion, or any other nuclear explosion, anywhere which would take place in any of the environments described ..."¹⁹⁴

The term assistance in both Articles I and II can raise problems as to its interpretation. Almost any kind of international nuclear assistance is potentially useful to a nuclear-weapon program.¹⁹⁵ However, the application of safeguards to all peaceful nuclear assistance to non-nuclear-weapon States,

¹⁹⁴ See Appendix 6.

¹⁹⁵ Willrich, Non-Proliferation Treaty, p. 94.

as required by Article III, provides a means to establish and clarify the peaceful purpose of most international nuclear assistance.¹⁹⁶

Fear was expressed that the prohibition on assistance, encouragement or inducement might cause nuclear-weapon States to discriminate against individual non-nuclear-weapon States in the peaceful uses of nuclear energy. The former might deny the transfer of economically sensitive material, instruments and/or know-how to interested non-nuclear-weapon States.¹⁹⁷

The obligation of nuclear-weapon States not to assist non-nuclear-weapon States applies to all the latter states whether they are Parties to the NPT, or not. As noted by Mason Willrich, any other result would constitute an inducement to non-nuclear-weapon States not to become parties.¹⁹⁸

Shortly after the presentation of the first identical treaty drafts of 24 August 1967, the UAR introduced an amendment to Article I which covered both non-transfer and non-assistance. It aimed at adding at the end of the article the following new paragraph :

"Each nuclear-weapon State undertakes to take appropriate measures to ensure that no person, company, enterprise or private, public or semi-public body that is subject to its jurisdiction and is engaged in nuclear activities participates in any act which is prohibited by this article."¹⁹⁹

Nigeria also submitted an amendment which contained a si-

196 Ibid.

197 See H. Anton Keller, Heinz Bolliger and Peter B. Kalff, "On the Economic Implications of the Proposed Nonproliferation Treaty", Revue de Droit International des Sciences Diplomatiques et Politiques, No. 1, 1968 (Extrait), pp. 11-12.

198 Willrich, Non-Proliferation Treaty, p. 95.

199 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 13 (ENDC/197, 26 Sept. 1967). The UAR had raised that question much earlier at the ENDC. (See note 118 above). See also ENDC/PV. 294, 16 Mar. 1967, para. 14.

milar obligation but which would have applied to each party and not merely to nuclear-weapon States.²⁰⁰ The amendment did not reappear in a subsequent set of amendments presented by Nigeria.²⁰¹

The UAR representative explained that the amendment proposed by his delegation was intended to close a definite and important loop-hole.²⁰² He argued that :

- It was not enough for the governments and official organs engaged in nuclear activities to respect the provisions of the Treaty in all good faith.²⁰³ In the field of conventional and nuclear weapons a large part was played by certain companies, firms or other bodies which are independent of the State.²⁰⁴

- The fate of such an important treaty should not be exposed to the hazards of divergent interpretations or differences between national legal systems.²⁰⁵

- Similar texts, as the one proposed, are often found in other treaties and fulfil a very useful function; that of assuring the contracting State against any actions by nationals of another signatory State contrary to the text or the spirit of the treaty concluded between them.²⁰⁶

- The principle of good faith that should prevail in the interpretation of treaties had never obviated the need for a

200 Ibid., Sec. 18 (ENDC/202, 2 Nov. 1967), Article IV-C. See also ENDC/PV. 351, 28 Nov. 1967, para. 14.

201 Ibid., Sec. 36 (ENDC/220, 28 Feb. 1968) and Sec. 37 (ENDC/220/Rev. 1, 14 Mar. 1968).

202 ENDC/PV. 367, 20 Feb. 1967, para. 11.

203 ENDC/PV. 333, 26 Sept. 1967, para. 9.

204 ENDC/PV. 340, 19 Oct. 1967, para. 11.

205 Ibid.

206 ENDC/PV. 367, 20 Feb. 1967, para. 11.

precise written agreement, particularly in a matter such as non-proliferation.²⁰⁷

Both the Soviet Union and the United States refused to incorporate the UAR amendment in the treaty draft. The Soviet representative based his country's refusal on the provisions of Articles I and II which were considered broad in scope and well known to cover all possible recipients of nuclear weapons - non-nuclear-weapon States, multilateral organisations or associations, and any private individuals or associations.²⁰⁸ The American representative mainly based the refusal of his country on the laws of the United States, which oblige the Government to "continue to be in control of work on nuclear weapons. Accordingly, it is the undertaking of governments with which we must be concerned in the treaty."²⁰⁹

The UAR did not insist on the amendment after the clarifications furnished by the two co-authors.²¹⁰ It must be said, however, that any violation of the Treaty by any of those persons or entities who are subject to the jurisdiction of States Party to the Treaty would engage the international responsibility of the latter according to well-established international legal norms.

(b) Assistance from a Nuclear-Weapon State to another Nuclear-Weapon State

This sort of assistance is allowed under the NPT which only

207 Ibid. Part of the arguments were in answer to the representative of Canada who considered that Article I implicitly covers any practical problem that might arise concerning the activities mentioned in the UAR amendment. See ENDC/PV. 338, 12 Oct. 1967, para. 7.

208 ENDC/PV. 370, 27 Feb. 1968, paras. 56-58.

209 Ibid., paras. 81-82.

210 Professor George Fischer is of the view that both the UAR and the Nigerian amendments should have been retained because of the increasing role played by the private sector in the nuclear field. Fischer, La non-prolifération des armes nucléaires, p. 67.

prohibits nuclear-weapon States from assisting "any non-nuclear-weapon State". This had been confirmed by several official statements.²¹¹ In fact, assistance to nuclear-weapon States was intended in the NPT to allow assistance and continued cooperation with the United Kingdom,²¹² which is assisted by the US on design, development and fabrication of atomic weapons through the provision of technology, non-nuclear components of weapons, and unfabricated nuclear material.²¹³

However, in the case of France, for example, assistance might be restricted by the Test-Ban Treaty. Each Party to the latter undertakes not to assist any other country, whether a Party or not, in carrying out nuclear explosions of the kind prohibited under the Treaty. For example, in a letter to the Chairman of the US Senate Committee on Foreign Relations, US Secretary of State, Dean Rusk, stated that the authority given in the Atomic Energy Act of 1946 as amended for transfer of materials and information to nations which made substantial progress in the development of atomic weapons, would be limited by the Test-Ban Treaty if a country engaged or proposed to engage in nuclear-weapon tests in the prohibited environments.²¹⁴

If France, which as of June 1975 carried out only underground nuclear explosions, were to resume its atmospheric nuclear-weapon tests in the Pacific, it would be reasonable

211 For example, see ENDC/PV. 369, 22 Feb. 1968, para. 51 and Gerard Smith in Hearings on Military Implications of NPT, p. 122.

212 Adrian Fisher in Hearings on NPT, 1969, p. 356.

213 See the "Memorandum" furnished by the Atomic Energy Commission to the US Senate Committee on Armed Services in Hearings on Military Implications of NPT, p. 141.

214 Hearings on Test Ban, pp. 976-977. The United States has a dormant agreement with the French for supply of fuel materials for land-based prototype reactor for submarine propulsion. See Hearings on Military Implications of NPT, p. 141.

to conclude that France would not, in principle, be receiving assistance in the manufacture of nuclear weapons from the Parties to the NPT which are at the same time Parties to the Test-Ban Treaty. However, it may be difficult sometimes to verify that the assistance rendered had a direct bearing on the nuclear-weapon-testing programme.

Assistance from a nuclear-weapon State to another nuclear-weapon State was criticised by India on the ground that such assistance might be rendered to a nuclear-weapon State "which may not have reached the same degree of sophistication in the development of its nuclear-weapon technology".²¹⁵ Japan pointed out that lack of restriction should by no means be taken as an implicit authorization and that self-restraint would be in accordance with the spirit of the Treaty.²¹⁶ Actually, assistance from a nuclear-weapon State to another nuclear-weapon State contributes to the vertical proliferation of nuclear weapons.

(c) Assistance from Non-Nuclear-Weapon States to Nuclear-Weapon States

Non-nuclear-weapon States undertake, under Article II of the NPT, "not to seek or receive any assistance", but they are not prohibited from assisting others including assistance to nuclear-weapon States.

Non-nuclear States under the first American treaty draft of 17 August 1965 were generally prohibited from granting assistance. Prohibition on providing assistance by non-nuclear-weapon States was also included in the US Amendments of 21 March 1966. Moreover, Article 3 of the Soviet draft of 24 September 1965 stipulated that : "The Parties to this Treaty shall refrain from offering any support, encouragement or inducement

215 A/C.1/PV. 1567 (prov.), 14 May 1967, pp. 63-65.

216 A/C.1/PV. 1566 (prov.), 10 May 1968, p. 32.

to States seeking to own, manufacture or exercise control over nuclear weapons."²¹⁷

Parties to the NPT who are at the same time Parties to the Treaty of Tlatelolco would, however, not be allowed to assist nuclear-weapon States. Paragraph 2 of Article I prohibits the Contracting Parties "from engaging in, encouraging or authorizing, directly or indirectly, or in any way participating in the testing, use, manufacture, production, possession or control of any nuclear weapons."²¹⁸

For those non-nuclear-weapon States permitted to assist nuclear-weapon States, they could, for example, furnish the latter the uranium necessary for their nuclear weapons' production. However, one of these countries, Canada, does not agree to sell uranium unless for peaceful purposes and under safeguards.

Another possibility raised by a Swedish scientist, Dr. Ulf Ericsson, is that non-nuclear-weapon States are formally free to assist nuclear-weapon States in the development of peaceful nuclear-explosives techniques. In his view, however, it is practically difficult or even impossible to do this without great controversy. What the non-nuclear-weapon States can do, in his view, is to assist in the study and development of peaceful effects of nuclear explosions.²¹⁹

(d) Assistance from a Non-Nuclear-Weapon State to Another Non-Nuclear-Weapon State

Assistance is obviously prohibited if the receiving country is a Party to the Treaty. The question arises only when the receiving country is not a Party to the Treaty. The UAR raised the question for the first time at the ENDC on 26 September

²¹⁷ See Appendix 3-B.

²¹⁸ See Appendix 8.

²¹⁹ Ericsson, "The Question of Nuclear Explosions", p. 10.

1967 when its representative submitted an amendment to Article II which aimed at inserting at the end of the last sentence the following :

"..., and not in any way to assist, encourage, or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, and control over such weapons and explosive devices."²²⁰ (Emphasis added.)

The UAR representative explained that the 24 August 1967 treaty draft contained a gap where "lies a possibility of the proliferation of nuclear weapons which must and can easily be eliminated by including this prohibition in the text of Article II..."²²¹ The UAR representative argued that :

- It could very well happen that a non-nuclear country party to the treaty, having certain aggressive designs and taking advantage of certain favourable international conditions, might assist another non-nuclear country not party to the treaty to obtain nuclear weapons.²²² Although the country would be acting counter to the whole intent and purpose of the NPT, it might assert that it had not violated the letter of the treaty.²²³

- The loop-hole in Article II was not a theoretical one of no practical significance. The importance of the distinction between theoretical and practical was entirely relative and might change with the circumstances of time and place. If it

220 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 13 (ENDC/197, 26 Sept. 1967).

221 ENDC/PV. 333, 26 Sept. 1967, para. 8.

222 ENDC/PV. 340, 19 Oct. 1967, para. 5. Elizabeth Young thought that the UAR representative had Israel or South Africa in mind. E. Young, A Farewell to Arms Control ?, pp. 104-105.

223 ENDC/PV. 340, 19 Oct. 1967, para. 6.

were a theoretical loop-hole, why was it eliminated by Article I of the Treaty ?²²⁴

- The UAR in formulating its amendment borrowed the language of Article I, namely the wording on which the sponsors of the two drafts had reached agreement.²²⁵

International censure and effective corrective measures by the permanent members of the UN Security Council for those who would take advantage of the loop-hole were either vague with respect to the first or needed a very clear and well-defined text with respect to the second.²²⁶

Both the Soviet Union and the United States refused to accept the UAR amendment to Article II. They based their refusal on two basic arguments. First, if a non-nuclear-weapon State party to the treaty were to assist another non-nuclear-weapon State to manufacture or acquire nuclear weapons, such a case would be regarded as a violation of the Treaty.²²⁷ The presumption would immediately arise that such an act had the purpose of developing nuclear weapons for the State rendering the assistance.²²⁸ Second, paragraph 2 of Article III contains a provision to the effect that all parties to the treaty under-

224 Ibid., para. 7.

225 Ibid., para. 8.

226 Ibid., para. 9. The arguments were, in fact, an answer to Canada's representative who mainly argued that the loop-hole was a theoretical one. See ENDC/PV. 338, 12 Oct. 1967, paras. 8-10. The United Kingdom also objected to all the UAR amendments on the ground that Articles I and II were the result of long discussions on the part of the co-Chairmen so as to close all loop-holes of practical significance. Any addition was considered to add further complications which seemed to the UK representative as a dangerous course to follow. ENDC/PV. 337, 10 Oct. 1967, para. 54.

227 ENDC/PV. 370, 27 Feb. 1968, para. 59 (USSR).

228 Ibid., para. 83 (US).

take not to provide any non-nuclear-weapon State with fissionable material or equipment for the processing or production of special fissionable material unless the fissionable material is subject to the safeguards required by the Treaty.²²⁹

The UAR representative commented on the clarifications given by the Soviet Union and the US with respect to all UAR amendments by making the following significant statement :

"Presumably those clarifications have been given by them not only as co-Chairmen but also as co-authors of the draft treaty, a fact which confers important weight upon them."²³⁰

Apparently, the opening up of the core of the Treaty for the UAR amendment might well have resulted in pressure from other countries to have the Treaty bar assistance by non-nuclear-weapon States not only to other non-nuclear-weapon States, but also to the nuclear-weapon States themselves.²³¹

The UAR amendment received considerable attention in the disarmament literature.²³² Mason Willrich considered that "the reluctance of the superpowers to amend their draft in this respect seems difficult to justify, especially since there was support for such an amendment from the non-nuclear-weapon States, and since there was no latent conflict between the superpowers as to interpretation".²³³ Moreover, Willrich noticed that under Article III, paragraph 2, safeguards are applicable only to nuclear materials and equipment provided for "peaceful

229 Ibid., para. 61 (USSR). See also para. 84 (US).

230 Ibid., para. 95.

231 Willrich, Non-Proliferation Treaty, p. 98.

232 For example, see Ibid., pp. 95-98; Elizabeth Young, "The Control of Proliferation : The 1968 Treaty in Hindsight and Forecast". The Institute for Strategic Studies (London), Adelphi Papers, No. 56, Apr. 1969, p. 15; J.H. Smith, loc.cit., p. 347; and E. Young, A Farewell to Arms Control ?, p. 117.

233 Willrich, Non-Proliferation Treaty, pp. 97-98.

purposes". "Therefore, under the Treaty as it stands, there would seem to be no legal obstacle to a non-nuclear-weapon party furnishing material assistance, such as uranium, to another non-nuclear-weapon state not a party to the Treaty for a nuclear weapons program."²³⁴

To Elizabeth Young, the US assurance that no government would have any reason for helping others except to acquire nuclear weapons for itself in violation of the Treaty seemed little unworldly. "If a government decided to go nuclear, would it not seek to hire help, and denounce the treaty only at the last moment ?" Mrs. Young, in support of her argument also referred to a statement by the US representative to the ENDC who conceded that what the treaty did not specifically prohibit was permitted.²³⁵ In fact, the very first statement made in, "Questions and Answers to Allies" referred to above conceded that : "The treaty deals only with what is prohibited, not with what is permitted".²³⁶

We must conclude that a loop-hole does exist in Article 11. It is a dangerous one even if it is considered by some as a theoretical loop-hole.

* * * * *

To sum up, in the first place principle (a) of GA resolution 2028(XX) has been variously interpreted with respect to Articles I and II, thus reflecting the difference of views on the non-proliferation concept that should be embodied in a non-proliferation treaty.

For the co-authors, i.e., the United States and the Soviet Union, the Treaty embodies the non-proliferation concept as

234 Ibid., p. 96.

235 E. Young, A Farewell to Arms Control ?, p. 117.

236 See note 127 above.

formulated in the "Irish Resolution" and therefore is void of any loop-holes which might lead to the proliferation of nuclear weapons. In fact the Treaty goes beyond the "Irish Resolution" in prohibiting the transfer of nuclear weapons between nuclear-weapon States, which was not envisaged in 1961.

For many others, the Treaty suffers from serious loop-holes because it does not go beyond the "Irish Resolution" in restricting the vertical proliferation of nuclear weapons by the nuclear-weapon States or in prohibiting the dispersal of nuclear weapons in the territories of non-nuclear-weapon States and the nuclear-sharing arrangements attached to such dispersal.

But regardless of this basic conceptual difference, the Treaty as it stands was found to suffer from loop-holes because of certain omissions such as not restricting explicitly assistance in the manufacture of nuclear weapons between non-nuclear-weapon States.

On the conceptual issue, it must be said that almost ten years after the "Irish Resolution" it would have been a considerable step forward if it were possible to restrict the vertical proliferation of nuclear weapons by the nuclear-weapon States and to bring to an end the deployment of nuclear weapons outside the territories of the nuclear-weapon States. The failure of the NPT to attain such objectives is due to major difficulties pertaining to East-West confrontation. Unfortunately, in permitting the assistance in the manufacture of nuclear weapons between nuclear-weapon States as well as from non-nuclear-weapon States to nuclear-weapon States, the Treaty is in fact contributing to the vertical proliferation of nuclear weapons. Banning such forms of assistance would have been a first step towards more drastic measures in restricting nuclear-weapon States' vertical proliferation.

The Treaty as it stands has certainly avoided serious loop-

holes by foreclosing the multilateral option and banning nuclear explosive devices other than weapons in the context of Articles I and II. However, we must insist that one serious loop-hole has been left open and that is the assistance in the manufacture of nuclear weapons or other nuclear explosive devices from non-nuclear-weapon States Parties to the Treaty to non-nuclear-weapon States not Parties to the Treaty. It is regrettable that Article II was not amended so as to preclude explicitly such an eventuality. Although assurances were given by the two co-authors that such assistance, if it takes place, would be considered as a violation of the Treaty are certainly of considerable value, they do not really substitute for a precise legal prohibition. We do believe, therefore, that the loop-hole should be remedied by resorting to the amendment procedure prescribed in Article VIII-1 and 2 of the NPT.

In spite of the shortcomings of Articles I and II, it should be noted, however, that the first Review Conference of the Parties to the NPT in 1975 confirmed that the obligations undertaken under these articles have been faithfully observed by all Parties. The Conference was convinced that the continued strict observance of these articles remained central to the shared objective of averting the further proliferation of nuclear weapons.²³⁷ Moreover, and as reported so far by the UN Secretariat to the second session of the Preparatory Committee for the Second Review Conference of the Parties to the NPT meeting in Geneva during August 1979, there have been no complaints or suggestions that the nuclear-weapon States or the non-nuclear-weapon States Parties to the NPT have failed to carry out the respective obligation assumed by them under Articles I and II.²³⁸

237 Final Declaration of the Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT/CONF/35/I), Annex I, p. 2.

238 Doc. NPT/CONF.II/PC.II/3, 1 Aug. 1979, para. 13.

The conceptual difference on non-proliferation also had a much greater impact in assessing the non-proliferation treaty drafts in the light of principle (b) on the acceptable balance of mutual responsibilities and obligations of the nuclear-weapon States and the non-nuclear-weapon States. With respect to the basic obligations in Articles I and II, the co-authors and their supporters, on the one hand, referred to the "Irish Resolution" to demonstrate that the Treaty was faithful to that resolution and therefore the obligations therein were well balanced. The critics of Articles I and II, on the other hand, maintained that the NPT should have gone beyond the "Irish Resolution" in the manner described above; and having failed to do this, the Treaty was not only affected by loop-holes but also suffered from imbalance.

It is quite obvious that the basic obligations in Articles I and II analysed in this Chapter demonstrate that the obligations of the two categories of States are basically different. In order to compensate the non-nuclear-weapon States for this discriminatory treatment accentuated by Article III, which exempts nuclear-weapon States from inspection, Articles IV, V and VI as well as Security Council resolution 255 were devised as compensatory measures. In other words, certain guarantees relating to peaceful uses of nuclear energy and to security were sought to redress the unbalanced provisions of Articles I and II in favour of the non-nuclear-weapon States.

How far these Articles and the resolution of the Security Council reflect, especially in conjunction with Articles I, II and III, a balance of obligations and responsibilities, can only be completely assessed at the very end of this study. In the meantime, we shall endeavour, in Part III, to analyse Articles IV and V on the peaceful uses of nuclear energy, as well as Security Council resolution 255 on nuclear security assurances. As for Article VI, which treats disarmament as another aspect of security, it was found preferable to examine it in the light of principle (c).

PART III

“The Treaty should embody an acceptable balance of mutual responsibilities and obligations of the nuclear and non-nuclear Powers”

(Principle (b))



CHAPTER 6

The Peaceful Uses of Nuclear Energy : Article IV

Texts :

Preamble

Affirming the principle that the benefits of peaceful applications of nuclear technology, including any technological by-products which may be derived by nuclear-weapon States from the development of nuclear explosive devices, should be available for peaceful purposes to all Parties to the Treaty, whether nuclear-weapon or non-nuclear-weapon States,

Convinced that, in furtherance of this principle, all Parties to the Treaty are entitled to participate in the fullest possible exchange of scientific information for, and to contribute alone or in co-operation with other States to, the further development of the applications of atomic energy for peaceful purposes,

Article IV

1. Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I and II of this Treaty.

2. All the Parties to the Treaty undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy. Parties to the Treaty in a position to do so shall also co-operate in contributing alone or together with other States or international organizations to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States Party to the Treaty, with due consideration for the needs of the developing areas of the world.

* * * * *

Since the advent of the nuclear age with its first catastrophic symptoms of 1945 in Hiroshima and Nagasaki, man has managed as well to use the atom for his welfare and prosperity. "The Atoms for Peace" speech by President Eisenhower at the UN General Assembly on 8 December 1953 opened a new era of co-operation in the field of peaceful uses of nuclear energy marked by the creation of the International Atomic Energy Agency which came into existence on 29 July 1957.¹

The wide progressive spread of the use of nuclear energy for peaceful purposes in many areas of the world, and the promising future potentials of the peaceful atom are fraught, however, with dangers due to the close parallels between the peaceful and military nuclear technologies. The NPT is in essence aiming at preventing nuclear energy exploited for peaceful purposes from being used to serve military ends. Articles II and III of the NPT are in fact the basic instruments for prohibiting and checking against the diversion of nuclear energy from peaceful uses to nuclear weapons or other explosive devices by the non-nuclear-weapon States.

Fears were expressed by the latter States that the NPT, by instituting such a control on their peaceful nuclear activities in order to prevent the proliferation of nuclear weapons, would hamper their full access to the knowledge and technology of the peaceful atom most needed for their future progress and prosperity; that international inspection might turn into industrial espionage; and that the Treaty would place them at the mercy of the nuclear-weapon States which would continue to enjoy their privileged position as the major suppliers of nuclear fuel and necessary equipment.

Freedom to exploit the atom for peaceful purposes to the benefit of the non-nuclear-weapon States was considered by the

1 For "The Atoms for Peace" speech, see GAOR, 8th Sess., Plenary Meetings, 470th plen. mtg, 8 Dec. 1953, paras. 79-126.

latter as the most tangible counterparts to their renunciation to acquire nuclear weapons. The provisional agenda for the Conference of the Non-Nuclear-Weapon States, drafted by the Preparatory Committee for the Conference, reflected clearly the balance expected between nuclear weapons' renunciation and peaceful atom expectations.² The final agenda of the Conference with respect to co-operation in the field of peaceful uses of nuclear energy was more or less tailored to the provisions of Articles IV and V of the NPT.³

It is against this background that the importance and significance of Article IV and the corresponding preambular paragraphs can be understood and appreciated. In contrast with Articles I, II and III which have all remained unaltered since they were first presented in identical treaty drafts by the original co-authors, (i.e., the United States and the Soviet Union), Article IV was not only introduced for the first time by the latter upon the request and initiative of non-nuclear-weapon States but also underwent considerable changes before its final formulation to satisfy non-nuclear-weapon States' demands. Its subject matter, as well as that of Article V, related to peaceful nuclear explosions, received the major part of the comments on the NPT at the ENDC after 1967. It was in fact the use of nuclear explosive devices for peaceful purposes, a question raised by the United States in August 1966 at the ENDC,⁴ which had triggered in dramatic proportions the more general question of the peaceful uses of nuclear energy. As peaceful nuclear explosions were to be the reserved domain of the nuclear-weapon States, fears were expressed that other domains would be restricted as well.

2 UN Doc. A/6817, 19 Sept. 1967, Ann. I, p. 2 (Item 4(a) and (b)).

3 See Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF. 35/10, 1 Oct. 1968), Ann. III, pp. 1-2.

4 See section II in Chapter 5.

The late eruption of the question of peaceful uses of nuclear energy at the end of the 1966 session of the ENDC and in 1967 explains why the early American and Soviet drafts of 1965, as well as the United States' amendments of 1966 to its 1965 draft, did not evoke the peaceful atom in a single paragraph, whether in the preamble or in the operative part.

The identical treaty drafts of 24 August 1967 contained the first text of Article IV and three preambular paragraphs,⁵ two of which remained exactly the same in the final text as quoted above. The third had moved in the following identical treaty drafts of 18 January 1968 to the operative part to compose Article V as will be shown in Chapter 7.

Article IV of the 1967 identical drafts was the result, as conceded by the US representative to the ENDC, of many suggestions by the non-nuclear-weapon States. He further conceded that the idea for such an article was originally derived from the Treaty of Tlatelolco.⁶ It was in fact the Mexican representative at the ENDC, in March 1967, who had put forward concrete ideas as to the formulation of an article on the peaceful uses of nuclear energy.⁷

Several formal amendments were proposed at the ENDC to modify Article IV. They were suggested by Mexico, Romania, Brazil and Nigeria.⁸ Only the Mexican proposal was partly accepted by the United States and the Soviet Union in their second identical

5 See Appendix 3-D.

6 ENDC/PV. 325, 24 Aug. 1967, para. 17. See text of Article 17 of the Treaty of Tlatelolco (Appendix 8).

7 ENDC/PV. 295, 21 Mar. 1967, paras. 12-13.

8 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 12 (ENDC/196, 19 Sept. 1967 (Mexico)); Sec. 14 (ENDC/199, 19 Oct. 1967 (Romania)); Sec. 16 (ENDC/201, 31 Oct. 1967 (Brazil)); and Sec. 18 (ENDC/202, 2 Nov. 1967 (Nigeria)).

drafts of 18 January 1968.⁹

The strengthening of Article IV in the January 1968 draft had not, however, appeased satisfactorily the desires of all members of the ENDC. Brazil had reintroduced its previous amendment and both Italy and Nigeria had submitted new amendments,¹⁰ none of which were incorporated in the 11 March 1968 joint US-Soviet draft in which Article IV remained intact.¹¹

The debates of the First Committee during the 22nd resumed session of the UN General Assembly in April-June 1968, in which the NPT was finally formulated, had introduced three changes to Article IV, two of which were in partial compliance with the previous Italian and Nigerian amendments. The third change was introduced in response to concerns expressed by Chile with respect to the status of the less developed countries in the nuclear field.¹²

This brief survey of the formulation of Article IV serves to demonstrate how much this article is the fruit of non-nuclear-weapon States' endeavours. The representative of Italy to the ENDC considered Article IV as an attempt to codify a new human right.¹³ But like all human rights, whether codified or not, their value can only be appreciated by the measures that must be taken to ensure their respect and free enjoyment. This was the prevailing concern at the Conference of Non-Nuclear-Weapon States held in Geneva almost two months after the

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- 9 See Appendix 3-E. See also the statement of the US representative at the ENDC introducing the 18 January text. ENDC/PV. 357, 18 Jan. 1968, paras. 59-60.
- 10 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Sec. 17 (ENDC/201/Rev. 2, 13 Feb. 1968 (Brazil)); Sec. 34 (ENDC/218, 20 Feb. 1968 (Italy)); Sec. 36 (ENDC/220, 28 Feb. 1968); and Sec. 37 (ENDC/220/Rev. 1, 14 Mar. 1968 (Nigeria)).
- 11 See Appendix 3-F.
- 12 A/C.1/PV. 1569 (prov.), 16 May 1968, pp. 71-75.
- 13 ENDC/PV. 367, 20 Feb. 1968, para. 57.

NPT was opened for signature on the first of July 1968. The Irish representative to Committee Two of the Conference, entrusted with the examination of programmes for co-operation in the field of peaceful uses of nuclear energy, was reflecting this prevailing concern when he noted that Article IV "afforded no absolute guarantee" that the benefits of the peaceful applications of nuclear energy would be made available to all States equitably.¹⁴ There was a strong need to reinforce the Article by a set of supplementary measures to ensure its prompt implementation. The result was that half of the resolutions adopted by the Conference were related to the peaceful uses of nuclear energy.¹⁵

The peaceful uses of nuclear energy have also received great attention at the 1975 Review Conference of the Parties to the NPT as well as at the 1978 United Nations General Assembly Tenth Special Session devoted to disarmament. Needless to say that the implementation of Article IV of the NPT also continues to be one of the main preoccupations of the IAEA and its Member States, as will be shown below.

In a first section we shall deal with paragraph 1 of Article IV which contains the basic right : the inalienable right to develop research, production and use of nuclear energy for peaceful purposes. A second section will dwell on the balance of obligations and rights contained in paragraph 2 of Article IV. The paragraph contains in fact two sets of obligations and rights which will be analysed separately. The first, which constitutes the first part of paragraph 2, is of general application to all the Parties to the NPT. They undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and

14 A/CONF. 35/C.2/SR.9, 17 Sept. 1968, p. 95. See also A/CONF. 35/C.2/SR.7, 13 Sept. 1968, p. 71 (Switzerland).

15 See Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF. 35/10, 1 Oct. 1968), Resolutions G, H, I, J, K, L and M, pp. 11-19.

technological information for the peaceful uses of nuclear energy. The second set, which constitutes the second part of paragraph 2, is of specific application to Parties to the Treaty in a position to co-operate in contributing alone or together with other States or international organizations to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States Party to the Treaty, with due consideration for the needs of the developing areas of the world. But as the modes of co-operation, whether bilateral, multilateral or through international organizations, equally apply to the first set of obligations and rights related to the exchange of equipment, materials and scientific and technological information, a separate third section will be devoted to the channels of co-operation with particular emphasis on the IAEA.¹⁶

But before going into all this, a brief outline of the object of Article IV, i.e., the use of nuclear energy for peaceful purposes, is most pertinent. It would especially help to appreciate the different priorities and divergent interests of the developed and the developing countries in this field with respect to the balance of rights and obligations enunciated in Article IV.

I. The Peaceful Uses of Nuclear Energy : A Brief Outline

No area of peaceful nuclear energy seems to be precluded by the NPT including the development and use of peaceful nuclear explosions which are, however, the strict domain of the nuclear-weapon States. Nevertheless, there was an urge by many States to define explicitly the peaceful uses of nuclear energy. For example, the representative of the FRG in Committee Two of the Conference of Non-Nuclear-Weapon States found that "the wording of the Treaty was not sufficiently explicit to permit

¹⁶ The role of the IAEA with respect to Articles V and III are treated in Chapters 7 and 10 respectively.

a definition of peaceful uses, as distinct from the prohibited production of nuclear weapons, which did not lend itself to different interpretations."¹⁷

The negotiating history of the NPT is full of examples of the peaceful uses of nuclear energy and their future prospects cited by the representatives of the two original co-authors as well as by others.¹⁸ The excellent guides, however, to the varied and different peaceful uses of the atom, their development, actual status and future prospects are to be found in the proceedings of the four Geneva conferences on the peaceful uses of the atom, held consecutively in 1955, 1958, 1964 and 1971 as well as the 1977 Salzburg International Conference on Nuclear Power and its Fuel Cycle. Moreover, at the initiative of the United States, the latter conference was followed by the Organizing Conference of the International Nuclear Fuel Cycle Evaluation (INFCE) held in Washington, D.C. on 19-21 October, 1977. The final results of the evaluation which are expected to be approved by the INFCE plenary in Vienna at the end of February 1980 should also be instructive in this respect. We shall have ample opportunities to revert to the 1971 and 1977 conferences in the present chapter and in other parts of this study.¹⁹

As INFCE results have not been finalized to this date of

17 A/CONF.35/C.2/SR.4, 10 Sept. 1968.

18 For example, see A/C.1/PV.1568 (prov.), 15 May 1968, pp. 31-32 (United States).

19 Peaceful Uses of Atomic Energy. Proceedings of the Fourth International Conference, Geneva, 6-16 September 1971, jointly sponsored by the UN and the IAEA (15 Volumes) (New York: United Nations and Vienna: International Atomic Energy Agency, 1972), hereinafter cited as Peaceful Uses of Atomic Energy, and Nuclear Power and Its Fuel Cycle. Proceedings of an International Conference on Nuclear Power and its Fuel Cycle, Salzburg, 2-13 May 1977 (8 Volumes) (Vienna: International Atomic Energy Agency, 1977), hereinafter cited as Nuclear Power and Its Fuel Cycle. For the Organizing Conference of INFCE, see DOSB, Vol. LXXVII, No. 2003, Nov. 14, 1977, pp. 659-665. The text of the Final Communiqué of the Conference is reproduced in Appendix 20.

writing, and as the Governments involved in preparing the final report of the evaluation have opted for confidentiality until the February 1980 plenary acts on the final report, we have to contend ourselves, before tackling the several branches of nuclear technology, with a brief background of the events that had led to the 1977 Organizing Conference. The ongoing evaluation is, in fact, investigating all branches of nuclear technology as it is indicated in the final Communiqué of the Conference attached to this study.

The United States, concerned about the consequences of the further proliferation of nuclear weapons and believing that the dangers would be increased by the further proliferation of sensitive technologies that entail the production of plutonium and highly enriched uranium, started to investigate on an international level a sure safe nuclear fuel cycle. In its efforts it emphasized the great risks involved of plutonium reprocessing and recycling and of fast breeder reactors. At the 1977 Salzburg Conference, several countries resisted United States overtures on the basis that in an era of energy crisis, plutonium as a fuel is vital if they were to meet future needs.

At the summit meeting held in London on 7 and 8 May 1977 the Heads of State or Government of Canada, France, the FRG, Italy, Japan, the United Kingdom and the United States committed themselves to increase nuclear energy to help meet the world's energy requirements while reducing the risks of nuclear proliferation. They decided to launch an urgent study to determine how best they can fulfill this objective. Throughout the summer of 1977, experts of the seven countries held meetings in Paris to consider the idea of INFCE. The United States also held informal discussions with a number of countries, following which it decided to convene the three-day Conference.

As INFCE is open to all interested States, the number of participants increased from 40 in 1977 to 56 in 1978, which is indicative of the great interest INFCE has generated. It has been agreed that INFCE is a technical study, not a negotiation, and governments are in no way committed to accept its results.

The five main branches of nuclear technology in the peaceful sector fall into five groups : the mining and concentration of nuclear raw materials (especially natural uranium); the production of enriched uranium; the fabrication of nuclear fuel elements; the design, construction and operation of nuclear reactors; and fuel reprocessing (recovery of enriched uranium and extraction of plutonium).²⁰ The objective of these technological activities is either the generation of energy or the use of ionizing radiation and radio-active isotopes.²¹

1. The Five Main Branches of Nuclear Technology

(a) The Mining and Concentration of Nuclear Raw Materials

Uranium and thorium ores are the nuclear source materials of primary interest. Only uranium is currently used in the peaceful applications of nuclear energy.²² The technical methods used for mining and concentrating natural uranium are relatively simple and not very costly. Some twenty countries at least are working their own deposits of uraniferous minerals, having mastered the methods used for concentrating natural uranium. The reasonably assured cumulative uranium resources at the cost of \$30/lb U_3O_8 were estimated in 1978 by the Nuclear Energy Agency (NEA) and the IAEA to be around 1,700,000 tons. About 85% of the reserves turn out to be in four countries, namely

20 See Achille Albonetti, "Access for Non-Nuclear-Weapon States, Who Have Renounced the Production, Acquisition and Use of Nuclear Weapons, to Technology for Peaceful Uses of Nuclear Energy", Conference of Non-Nuclear-Weapon States, Geneva, 1968 (A/CONF.35/Doc. 6, 3 July 1968), pp. 4-9.

21 See Contributions of Nuclear Technology to the Economic and Scientific Advancement of the Developing Countries. Report of the Secretary-General (UN Doc. A/7568, 24 July 1969), para. 8, hereinafter cited as Contributions of Nuclear Technology (A/7568). The following is based on Albonetti's paper and the Report of the Secretary-General unless otherwise indicated.

22 On the status of thorium technology, see Peaceful Uses of Atomic Energy, Vol. 9, pp. 237-300 and Nuclear Power, and Its Fuel Cycle, Vol. 2, pp. 37-53 and 455-471. In INFCE it was estimated that commercial deployment of thorium cycles probably could not be available until after the year 2000.

Australia, Canada, South Africa and the United States.²³ The production capability for uranium was about 39,000 tons u/a in 1978. It could be increased to some 51,000 tons u/a by 1980.²⁴

It is estimated that the annual demand for uranium could theoretically range from 32,000 to 43,000 tons in 1980.²⁵ The Director General of the IAEA, Dr. Sigvard Eklund, in presenting the Agency's report for the year 1971-1972 to the 27th Session of the UN General Assembly, indicated that 2.5 million metric tons of uranium must be explored in the next two decades to meet the requirements of the nuclear industry towards the end of the century.²⁶

(b) The Production of Enriched Uranium

Enriching uranium means the alteration of the natural mixture of the isotopes to increase the concentration of one or more of them. Uranium 235 which is the fissile material needed for either peaceful or military purposes is only 0.7 per cent of natural uranium, the rest being U-238. For peaceful purposes uranium could be slightly enriched, containing as little as 3 per cent in U-235. For military purposes, the enrichment in U-235 could reach as high as 90 per cent.

The separation of U-235 from U-238 is a most complicated and costly enterprise. The methods used for producing enriched uranium were among the most well-kept secrets. In principle,

23 IAEA, The Annual Report for 1978 (GC(XXIII)/610), figure 4, p. 21. U₃O₈ is the oxide form into which uranium is usually milled. Assured resources could be defined as known deposits which can be recovered within the given cost range with currently proven mining and processing technology.

24 INFCE sources.

25 Nuclear Power and Its Fuel Cycle, Vol. 2, p. 108.

26 A/PV. 2076 (prov.), 31 Oct. 1972, pp. 9-10. For an extensive study of uranium resources, see Evaluation of Uranium Resources. Proceedings of an Advisory Group Meeting Organized by the International Atomic Energy Agency (Vienna: IAEA, 1979).

there are many ways of enriching uranium. However, the two basic methods are gaseous diffusion and gas centrifuge.²⁷ They are both based on the same technique of transforming uranium to a gaseous form (uranium hexafluoride) and then separating the lighter from the heavier molecules. By repeating the separation process many thousands of times, it is possible gradually to concentrate the U-235. In gaseous diffusion, the gas is pumped up against a wall containing billions of microscopic holes through which the lighter molecules tend to pass more easily. In a gas centrifuge, the gas rotates at a very high speed and the heavier atoms tend to concentrate around the periphery.²⁸

Until recently, the only countries producing enriched uranium have been the five nuclear-weapon States. The rest of the world had to depend on them to acquire the enriched uranium needed for their peaceful programs. The Americans so far are in a dominant position in this respect. The gaseous diffusion is the only method at present being used on a vast scale by those countries. As to the centrifuge method, the Americans built a plant as part of their wartime effort, but later decided that the basic technology was not sufficiently developed to make it effective.²⁹ However, on 4 March 1970, the FRG, the Netherlands and the UK signed at Almelo, the Netherlands, an agreement on collaboration in the development and exploitation of the gas centrifuge process.³⁰ They were prompted by the commercial

27 For other methods being investigated or developed for commercial applications; such as nozzle, chemical and laser, see Nuclear Energy and Nuclear Weapon Proliferation (London: Taylor & Francis Ltd, 1979) (Stockholm International Peace Research Institute), Chapter 2, pp. 49-90.

28 See Leonard Beaton, Must the Bomb Spread? (Harmondsworth: Penguin Books, 1966), pp. 28-31.

29 Ibid. See also John Maddox, "The Nuclear Club", The Listener (London), 5 June 1969 reprinted in Survival, Vol. XI, No. 9, Sept. 1969, p. 275. The difficulty was not a difficulty of principle, or even initial cost, but of practice.

30 For the text of the agreement, see Nuclear Law Bulletin, No. 6, November 1970, pp. 41-54. See also D. C. Avery and Others, "Centrifuge Plants in Europe" (A/CONF.49/P/493:

attractiveness of this method to guarantee in the future an independent source of enriched uranium for their power reactors. Work already undertaken seems to confirm that the specific power consumption of the centrifuge process is much lower than that of the gaseous diffusion process.³¹

It is expected that most nuclear reactors built in the 1980's will burn enriched uranium, hence the need to accelerate its production to meet future needs. At one point the United States was considering building a fourth uranium enrichment plant.³²

(c) The Fabrication of Fuel Element

Fuel elements are among the most important components - if not the most important component - of nuclear reactors. The techniques employed in their fabrication vary with the type of reactor for which they are designed. Advanced reactors, for example, need fuel elements that involve particularly heavy capital outlay and complex technological features which only

United Kingdom) and M. Bogaardt; K. Einfeld; and J. Tatlock, "Objectives and Progress in the Centrifuge Enrichment Plant Industry" (A/CONF.49/P/382: The Netherlands) in Peaceful Uses of Atomic Energy, Vol. 9, pp. 53-61 and 63-68 respectively.

31 Ibid., p. 66. For the advantages of the gas centrifuge method, see also Leonard Beaton, "Controlling the Atom Menace", The Times, 32 Jan. 1969, p. 8. The advantages are: electricity cost will be only a fraction of that required in a diffusion plant; centrifuge cascades can work on a much smaller scale and so can be progressively built up over a period of time; and consequently centrifuge designed to do the early stages of uranium enrichment can be later adapted for the higher enrichment stages. For centrifuge advantages based on six years of operation by Urenco, see D. Aston and E. Raetz, "Status of the Urenco/Centec Centrifuge Project and Advantages of the Process" (IAEA-CN-36/99) in Nuclear Power and Its Fuel Cycle, Vol. 3, pp. 143-152.

32 The three US plants are at Oak Ridge, Tenn.; Paducah, Ky.; and Portsmouth, Ohio. For a global view of the status of enrichment facilities in operation, under construction and in the research and development stage, see Ole Pedersen, "L'industrie de la séparation des isotopes d'uranium: évaluation récente," IAEA Bulletin, Vol. 19, No. 1, Feb. 1977 (French edition), pp. 40-52.

the industrially advanced countries can command. There are industrial plants for making fuel elements in the US, the UK, France, the FRG, Belgium and other industrialised countries.³³

(d) Nuclear Reactors

There are many types of reactors. There is an infinite number of possible combinations of fuels, moderators, cooling systems, coolants and reflectors by which the energy generated in the core can be extracted from the reactor. The techniques used in designing, building and operating a nuclear reactor are almost invariably regarded as trade secrets. They call for highly sophisticated techniques which, as a rule, are available only in industrially advanced countries.

Reactor systems can be classified at present in three main categories : light water reactors (LWR), heavy water reactors (HWR) and gas-cooled graphite-moderated reactors.

Light water reactors (so-called because they use light or ordinary water as the moderator) include the boiling water and pressurized water types using enriched uranium fuel. They have been developed principally in the United States and the USSR. Most of the reactors that have become competitive, and which have therefore been sold and exported, are of the American type.

Heavy water reactors (which use heavy water as the moderator) have six or more variants using natural or enriched uranium, pressure tubes or pressure vessels, and different coolants, such as light water, heavy water, gas or organic liquids.

Gas-cooled reactors include the carbon dioxide cooled, graphite-moderated natural uranium reactors developed in the UK and France. High-temperature gas-cooled reactors (HTR) using enriched uranium fuel are under development.³⁴

³³ Contributions of Nuclear Technology (A/7568), p. 7.

³⁴ For more details about nuclear power reactors, see Ibid., Annex II.

In choosing among these three systems, the important question is whether to introduce a system that uses natural uranium fuel, or one that uses lightly enriched uranium. The latter material is actually produced by very few countries and not all of them are exporting it on a substantial scale. The former material is more widely available, as shown above, and allows for those countries having an indigenous supply to be self-sufficient and independent in their peaceful nuclear endeavors. On economic and technical grounds, the reactors using enriched uranium have lower capital, but somewhat higher fuel costs than those using natural uranium. However, the latter material imposes severe limitations on reactor design and operation. On the other hand, reactors using natural uranium produce more plutonium, a very necessary material for future fast breeder reactors. Militarily, a country keeping an option for producing atomic bombs would most probably opt for reactors using natural uranium, unless it can indigenously invest in the production of highly enriched uranium suited for nuclear-weapon manufacturing.

With regard to the future fast breeder reactors, which will be using plutonium mixed with some uranium as a fuel, they are called "breeders" because they produce more plutonium than they consume; "fast breeder" because they use fast neutrons (not because they breed fast). The time it takes to accumulate enough excess plutonium to start another reactor of the same type is typically about 10 years.³⁵ If we add to this that the breeders use about 100 times less uranium than thermal convertors,³⁶ the demand on uranium might considerably decrease, thus alleviating the strain on this source material.

A first generation of breeders have been developed and are in operation in the Soviet Union, the United Kingdom and France.

35 Victor Gilinsky, Breeder Reactors and the Spread of Plutonium (Santa Monica, California : The Rand Corporation, P-3483, Nov. 1966), p. 3.

36 Ibid., p. 4. See also for the same author Where is Nuclear Reactor Technology Taking Us ? (Santa Monica, California : The Rand Corporation, P-3589, Apr. 1967).

The latter has also invested in building SuperPhenix, a 1200 MWe prototype power plant east of the city of Leons, representing the culmination of the development phase. Other breeders are under construction by the FRG and Japan as well as jointly by the FRG, Belgium and the Netherlands.³⁷

As to the United States, concern over nuclear-weapon proliferation and the desire to examine fuel cycle alternatives that minimize the risks of proliferation prompted the President to decide on 7 April 1977, inter alia, to restructure the US breeder programme to give greater priority to alternative designs of the breeder and to defer the date when breeder reactors would be put into commercial use, a decision he hoped would set an example to other nations to follow.³⁸

Research is also being undertaken to prove the feasibility of constructing a fusion reactor - a thermonuclear device releasing more energy through a controlled nuclear fusion than through a controlled nuclear fission.³⁹ In the words of Dr. Glenn Seaborg, the then chairman of the US Atomic Energy Commission (AEC), "(t)he successful development of a controlled thermonuclear fusion reactor would mean the availability of an energy source equal to 500 Pacific Oceans full of high grade petroleum ..."⁴⁰

37 See IAEA, The Annual Report for 1978 (EC(XXIII)/610), paras. 68-72 and International Cooperation on Breeder Reactors (New York: The Rockefeller Foundation, 1978)(International Policy Studies), especially Chapter 2. On the French programme; see G. Besse, M. Rozenholc, B. Saitcevsy and G. Vendryes "Situation et perspectives du programme français de réacteurs à neutrons rapides" in Nuclear Power and Its Fuel Cycle, Vol. 1, pp. 371-392.

38 US ACDA, Documents on Disarmament, 1977 (Pub. No. 101, June 1979)(Washington, D.C.: US Government Printing Office, 1979), p. 220.

39 See "Fusion: Where Do We Stand?" IAEA Bulletin, Vol. 13, No. 5, 1971, pp. 24-30. See also IAEA, The Annual Report for 1978 (GC(XXIII)/610), paras. 139-141. The Soviet Union has recently reported a major step toward a fusion plant. The New York Times, 20 Oct. 1979.

40 Glenn T. Seaborg, "Need We Fear our Future ?", Bulletin of the Atomic Scientists, Vol. XXIV, No. 1, Jan. 1968, p. 37.

(e) Facilities for Fuel Reprocessing and the Extraction of Plutonium

In practice, only a small part of the fissionable material in the natural uranium or in the enriched uranium is consumed in the reactor core. The rest can be used again in another reactor if, after a lapse of some time, it is suitably treated in so-called fuel reprocessing facilities or chemical separation plants. These plants are essential to the production of plutonium, the basic raw material for warlike nuclear devices. With the advent of fast breeder reactors, plutonium might displace uranium as the primary nuclear fuel. Furthermore, the potential of recycling plutonium in thermal reactors indicates its future commercial importance.

Until recently, fuel reprocessing plants were known only to nuclear-weapon States. At present, there are such facilities in a number of non-nuclear States, among them India, Italy, the FRG, Japan and Belgium. The latter took over, in October 1978, the European company for the Chemical Processing of Irradiated Fuels (Eurochemic), which was previously a joint project of the Nuclear Energy Agency (NEA), a specialized agency of the Organization for Economic Co-operation and Development (OECD).⁴¹

Concern over nuclear-weapon proliferation around the world also prompted the President of the United States to couple his decision on fast breeders referred to above with another decision deferring indefinitely the commercial reprocessing and recycling of the plutonium produced in the US nuclear power programmes.⁴² Those decisions paved the way to the US initiative

41 For the texts of the convention constituting the Company and its Statute, see Multilateral Agreements (Vienna: IAEA, 1969) (Legal Series No. 1). For the takeover of the company by Belgium, see Nuclear Law Bulletin (NEA), Vol. 22, Dec. 1978, pp. 38-39.

42 Documents on Disarmament, 1977, p. 220. The President pointed out in his statement of 7 April 1977 that the plant at Barnwell, South Carolina, will receive neither federal encouragement nor funding for its completion as a reprocessing facility. However, the reprocessing of plutonium for weapon purposes is still underway at the Savannah River Plant in Aiken, South Carolina. The Washington Post, 27 Dec. 1979.

in INFCE with a view of investigating potential nuclear fuel cycles more resistant to nuclear-weapon proliferation projects than the present cycles, whereby plutonium is produced, reprocessed and used as a fuel. Those decisions also paved the way to the US Nuclear Non-Proliferation Act of 10 March 1978,⁴³ which prohibits the export of sensitive nuclear material and equipment to non-nuclear weapon States, such as plutonium and reprocessing plants; and requires the tightening of international safeguards on the recipient countries. The new American legislation will be later assessed, especially in conjunction with the study of international safeguards.

2. The Uses of Nuclear Technology

(a) The Generation of Energy

The energy is generated by nuclear reactors and peaceful nuclear explosions. As the latter's potential applications are treated in Chapter 7, we will confine ourselves here to the peaceful applications of nuclear reactors.

The energy generated by reactors is used either for electricity production or as heat in industrial processes, as motive power (including ship propulsion) or in desalination.

As pointed out by the IAEA, nuclear power has become an accepted component of electric power in many parts of the world. It is beginning to be treated as a "conventional" method of producing electricity and is selected primarily on the basis of economic considerations. By the end of 1978

⁴³ Public Law 95-242, Mar. 10, 1978 in the US Congress, Senate, Committee on Governmental Affairs, Legislative History of the Nuclear Nonproliferation Act of 1978, H.R. 8638 (Public Law 95-242) (Prepared for the Subcommittee on Energy, Nuclear Proliferation, and Federal Services of the Committee on Governmental Affairs by the Congressional Research Service, Library of Congress, Jan. 1979), 96th Congress, 1st Session (Washington, D.C.: US Government Printing Office, 1979), pp. 6-39, hereinafter cited as Legislative History of the Nuclear Nonproliferation Act. In view of the implications and effects of this Act on US nuclear co-operation with other countries, the Act is reproduced in Appendix 21 to this Study.

the world's installed nuclear power capacity amounted to 110.000 megawatts, or about 6 percent of the world's total electric generating capacity (1.900.000MW(e)). By 1985, on the basis of plants now being built, the share of nuclear power will increase to about 12 percent of the electricity actually produced (2.700.000 MW(e)). This share represents the equivalent of more than 400 million tons of oil a year. Moreover, present forecasts by the IAEA indicate that nuclear capacity could be between 20 and 26 percent of a total world electrical generating capacity by the year 2000. Up to 1972, only two developing countries had nuclear power generating facilities in operation, namely India and Pakistan, financed respectively by the US and Canada. In 1978 it was estimated that twelve developing countries are scheduled to have power reactors in operation by 1984. All these projections are more cautious than earlier ones. The rising political opposition to nuclear power, new regulatory demands and stricter export conditions have contributed to the cutting back on plans for nuclear power.⁴⁴

Nuclear energy as a motive power for space power and marine propulsion is a field where nuclear-weapon States have made considerable achievements. Only very few advanced non-nuclear-weapon States, namely the FRG, Italy and Japan, have also made some progress in ship propulsion.⁴⁵

Desalting of sea-water to satisfy increasing demand for water has great possibilities. To date, the desalting of water for municipal and industrial uses has been applied on a small scale, the process still being very expensive. In existing desalting plants, the chief source of energy is fossil-fuel.

⁴⁴ See IAEA, Annual Report for 1978 (GC/XXIII)/610), paras. 47-48; Statement of Sigvard Eklund, the Director General of the IAEA before the UN General Assembly on 2 November 1979 in UN Doc. A/34/PV. 52 (prov.), 5 Nov. 1979, p. 7; and SIPRI Year Book 1979, pp. 305-311.

⁴⁵ Peaceful Uses of Atomic Energy, Vol. 7, pp. 247-322 and Nuclear Power and Its Fuel Cycle, Vol. 1, pp. 683-694.

Since very large nuclear reactors produce cheap energy, nuclear energy looks especially attractive for the very large desalting plants. In particular, large agro-industrial nuclear-powered plants producing desalted water for agricultural purposes and electricity for power-intensive industries look promising. A study has been carried out by the Oak Ridge National Laboratory in the US and the IAEA on the potentialities of these plants, but the first dual-purpose plant, and the only one so far, has been set up in the Kazakh Soviet Socialist Republic in the town of Shevchenko. It produces 120.000 cubic meters per day.⁴⁶

Lastly, it has to be pointed out that the expansion of nuclear power in the future would greatly depend on energy needs and acceptance by public opinion. For example, the March 1979 accident at the Three Mile Island near Philadelphia has triggered an intensive debate between the proponents and exponents of nuclear energy. Although it is too early to assess the effect of the accident on future plans for nuclear power, one fact is quite apparent, namely, public opinion's deep concern about nuclear safety. This aspect has been one of the main preoccupations of the US President's Commission on the accident. Internationally, it has been an ongoing preoccupation, for example, at the IAEA, which is convening a major international conference on nuclear safety in Stockholm during 1980.⁴⁷

(b) The Uses of Ionizing Radiation and Radio-Active Isotopes

The uses are so numerous. In food and agriculture, the utility of nuclear methods is evidenced by the millions of hectares of land on which high-yield radiation-mutant crop varieties are already under cultivation. In medicine and biology, nuclear

⁴⁶ Contributions of Nuclear Technology (A/7568), p. 37 and Nenad Ralsic', "Dessalement de l'eau de mer au moyen d'énergie d'origine nucléaire", IAEA Bulletin, Vol. 19, No. 1, Feb. 1977, (French edition) pp. 21 and 22.

⁴⁷ See Report of the President's Commission on the Accident at Three Mile Island. The Need for Change: The Legacy of TMI (Washington, D.C., October 1979), hereinafter referred to as Report on Three Mile Island and A/34/PV. 52 (prov.), 5 Nov. 1979, p. 13, (Sigvard Eklund, IAEA's Director General).

techniques find numerous applications. Radio-active materials are used, for example, as tracers in medical research as well as in clinical diagnosis and investigation, and in the treatment of cancer. In industry, large radiation sources have been installed for various purposes, chiefly for sterilization. Radio-isotopes have found great application in measuring and controlling physical parameters in industry. In geology and hydrology, nuclear techniques have been successfully applied in the search of petroleum. Radio-isotopes are making a major contribution to locate water sources, especially in arid areas.⁴⁸

In conclusion, the States which master most of the branches of nuclear technology and their different applications for peaceful purposes as described above are very few. At the other end of the ladder, a great many countries have not yet started to develop any nuclear technological competence. The majority of them do not yet have nuclear research reactors most needed to develop the know-how in the nuclear field. Between the two categories and in different degrees, a number of countries are making headway in the peaceful atom.

II. The Inalienable Right

The language of paragraph 1 of Article IV stating the inalienable right to develop research, production and use of nuclear energy for peaceful purposes has not undergone any changes since the presentation of the identical treaty drafts of 24 August 1967. In the latter drafts, however, this paragraph constituted the first phrase of the only paragraph of Article IV. It was later separated as an independent paragraph in the identical treaty drafts of 18 January 1968, in compliance with a Mexican proposal, so as to distinguish it from the right to participate in the fullest possible exchange of information on the peaceful uses of nuclear energy.⁴⁹ The paragraph is an application of the principle enunciated in the preamble of the

48 See Contributions of Nuclear Technology (A/7568), pp. 12-13. For more details, see also pp. 38-54.

49 See ENDC/PV. 331, 19 Sept. 1967, para. 7 (Mexico).

Treaty that "the benefits of peaceful applications of nuclear technology ... should be available for peaceful purposes to all Parties to the Treaty, whether nuclear-weapon or non-nuclear-weapon States."

During the different phases of the NPT negotiations, there was unanimity that the Treaty should certainly not hamper full access to knowledge and technology in the field of the peaceful uses of nuclear energy. As well put by a delegate attending the Conference of Non-Nuclear-Weapon States, "the right of every State to use nuclear energy for peaceful purposes was inherent in its sovereign right to independent economic development, and was an essential attribute of national sovereignty and independence."⁵⁰

The right to use nuclear energy for peaceful purposes is of equal significance to developed as well as to developing countries as will be shown later in this chapter. Willy Brandt, the then Foreign Minister of the FRG, for example, stated before the Bundestag, on 27 April 1967, that Germany was not ready to accept anything at all which hindered the peaceful utilisation of nuclear energy. He went to the extent of saying that the future of the Federal Republic of Germany as a modern industrial State depended on this principle.⁵¹ For the developing countries, it is a matter of participation in the nuclear age even if they are lagging behind in conventional technologies. As explained by one writer, "(t)he problem of peace has increasingly become one of trying to keep a minimum membership of the nuclear club. On the other hand, the problem of human

⁵⁰ A/CONF. 35/C.2/SR.9, 17 Sept. 1968, p. 98 (Romania).

⁵¹ See Treaty on the Non-Proliferation of Nuclear Weapons. German Attitude and Contribution. Documentation (Bonn : Press and Information Office of the Federal Government, 1969), p. 18.

dignity is increasingly becoming one of maximising participation in the nuclear age."⁵²

The inalienable right is expressed in a negative form in Article IV so as to preclude an interpretation whereby the NPT might conflict with the exercise of that right.⁵³ Its exercise, however, is subject to two conditions : non-discrimination and conformity with Articles I and II of the NPT.

The phrase "without discrimination" in paragraph one of Article IV had seemed to one delegation at the ENDC not to secure enough guarantee for the peaceful enjoyment of the atom. Romania, in a set of amendments to the 1967 identical treaty drafts, suggested the insertion of the words "on a basis of equality" immediately before the above-mentioned phrase.⁵⁴ Romania did not pursue her suggestion further. It seems to have been dissuaded by the redundancy of its suggestion.⁵⁵

The conformity of the inalienable right to develop research, production and use of nuclear energy for peaceful purposes with Articles I and II of the NPT virtually means the observance of the restrictions imposed in both Articles on the transfer and acquisition of nuclear explosive devices.

52 Ali A. Mazrui, "Numerical Strength and Nuclear Status in the Politics of the Third World", The Journal of Politics, Vol. 29, No. 4, Nov. 1967, pp. 809-810.

53 See ENDC/PV. 331, 19 Sept. 1967, para. 7 (Mexico).

54 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 14 (ENDC/199, 19 Oct. 1967). Romania also suggested, after the sixth preambular paragraph of the 1967 identical treaty drafts, the insertion of a new paragraph which combined equality with non-discrimination. Ibid.

55 The representative of Canada considered that "without discrimination" meant "on a basis of equality", and therefore the Romanian amendment seemed to him to be redundant. ENDC/PV. 345, 6 Nov. 1967, para. 33.

Brazil, in consistency with its previous amendments to Articles I and II, had also tried twice to amend Article IV to allow all the Parties the inalienable right to develop research, production and use of nuclear explosive devices for civil uses.⁵⁶ However, to compensate the non-nuclear-weapon States for their abstention from exercising the latter right, the NPT in its preamble affirms the principle that "the benefits of peaceful applications of nuclear technology, including any technological by-products which may be derived by nuclear-weapon States from the development of nuclear explosive devices, should be available for peaceful purposes to all Parties ..."⁵⁷ (Emphasis added.) This is what is known as the "spin-off". It should not be confused with the more specific question of the applications of nuclear explosive devices for peaceful purposes under Article V of the NPT.

It is to be noted that the preambular paragraph speaks of technological by-products which may be derived from the development of nuclear explosive devices and not nuclear weapons, though the former englobes the latter. The discretion here is understandable. If nuclear weapons had been mentioned side by side with other nuclear explosive devices, as is the case in both Articles I and II, it would have virtually meant the acquiescence of the non-nuclear-weapon States Parties to the NPT to the continued vertical proliferation of nuclear weapons by the nuclear-weapon States, a situation which the former have tried unsuccessfully to limit or put an end to. This discretion might have been in response to the observations such as those made by the UAR representative at the ENDC several months before the presentation of the 1967 identical treaty drafts. He said that :

56 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 16 (ENDC/201, 31 Oct. 1967) and Sec. 17 (ENDC/201/Rev. 2, 13 Feb. 1968).

57 See Appendix 3.

"... even if military programmes gave rise to such an advantage, that would not be sufficient to justify its mention in any form in a treaty on the non-proliferation of nuclear weapons, for the starting point of such a mention would rest on an implicit and gratuitous blessing by us of the military nuclear programmes which the treaty is intended to help to eliminate."⁵⁸

The interest in spin-off, however, emanates specifically and basically from the fact that the great scientific and technological progress achieved by the nuclear-weapon States in the field of nuclear energy was the direct as well as the indirect result of military research and development (R & D). For example, the separation of uranium isotopes was a direct result of the atomic bomb project. Extraction of plutonium from irradiated fuel is another example. Development of high speed scientific computers and data processing devices is an example of an indirect benefit.⁵⁹

Future spin-off benefits can be expected in the form of prime stimuli to high frequency, laser, neutron and controlled fusion research, and in the form of technical and managerial skills in these probable future fields.⁶⁰

The question of spin-off had received considerable attention from a number of non-nuclear-weapon States and especially

58 ENDC/PV. 294, 16 Mar. 1967, para. 34. The United States used to speak of benefits of peaceful nuclear technology that are by-products of weapons research. For example, see the Message of President Johnson to the ENDC on 21 February 1967. ENDC/187, 21 Feb. 1967.

59 For more examples, see Ryokichi Sagane, "Assistance to Non-Nuclear-Weapon States, Who Have Renounced the Production, Acquisition and Use of Nuclear Weapons, in the Implementation of Programmes of Peaceful Uses of Nuclear Energy", Conference of Non-Nuclear-Weapon States, Geneva, 1968 (A/CONF.35/Doc. 5, 3 July 1968), pp. 5-7.

60 Keller, Bolliger and Kalff, loc.cit., pp. 33-34.

from those most advanced in the nuclear field such as the Federal Republic of Germany and Switzerland.⁶¹ The latter had even suggested that the intention expressed in the preamble should be transferred into a juridical commitment in the body of the treaty.⁶² Nigeria, in a working paper presented to the ENDC in November 1967, put forward a proposal in this sense but it was not pursued much further.⁶³

Some advanced non-nuclear-weapon States maintained that "spin-off" was very slight and that their peaceful nuclear energy programmes had not suffered because they had chosen not to produce nuclear explosive devices.⁶⁴ For example, the representative of Sweden to the ENDC stated that :

"Relying on our experience, my delegation is convinced that research, development and production in reactor technology and similar fields would not have to be hampered by lack of the knowledge obtained through manufacture of nuclear weapons. Twenty years ago that may have been the case ..."⁶⁵

The United States representative to the ENDC had, in fact, pointed out that the peaceful "spin-off" was largely obtained long ago. He promised, however, that the US would continue to make it available to other countries.⁶⁶ Mr. Dean Rusk, the then US Secretary of State, had also pointed out much earlier that the actual industrial spin-off "is very small, indeed, infinitesimal."⁶⁷

61 See "Statement by Foreign Minister Brandt to the Bundestag Nonproliferation of Nuclear Weapons (extracts), February 1, 1967" in Documents on Disarmament, 1967, p. 49.

62 ENDC/204, 24 Nov. 1967, p. 2.

63 See DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 18 (ENDC/202, 2 Nov. 1967).

64 For examples, see UN Doc. A/6817, 19 Sept. 1967, Ann. V, pp. 17-19.

65 ENDC/PV. 300, 30 May 1967, para. 9.

It remains to be seen how the preambular paragraph on "spin-off" will be implemented by the nuclear-weapon States, taking into consideration that it entails no legal-binding commitment. However, the obligation to facilitate the fullest possible exchange of equipment, materials and information in the second paragraph of Article IV accommodates the "spin-off" benefits as will be shown below.

But before embarking on the analysis of Article IV.2, it should be pointed out that the 1975 Review Conference of the Parties to the NPT reaffirmed in its "Final Declaration" that nothing in the NPT should be interpreted as affecting, and noted with satisfaction that nothing in the Treaty had been identified as affecting, the inalienable right prescribed in Article IV.1. Moreover, the 1978 Tenth Special Session of the UN General Assembly devoted to disarmament pointed out in its "Final Document" that non-proliferation measures should not jeopardize the full exercise of the inalienable rights of all States to apply and develop their programmes for the peaceful uses of nuclear energy for economic and social development in conformity with their priorities, interests and needs.⁶⁸ Such reaffirmations are significant and reflect, in fact, increasing concern over the restrictions which have been imposed by nuclear supplier States affecting the full exercise of these "inalienable rights"; as will be shown in the course of our review of the implementation of the provisions of paragraph 2 of Article IV.

III. The Balance of Obligations and Rights

Turning now to paragraph 2 of Article IV, it is to be noted that the paragraph is an application of the principle enunciated in the preamble that "all Parties to the Treaty are entitled to participate in the fullest possible exchange of scientific information for, and to contribute alone or in co-operation

⁶⁸ See Appendices 17 (Review of Article IV) and 22 (para. 68) respectively.

with other States to, the further development of the applications of atomic energy for peaceful purposes".

1. The Fullest Possible Exchange of Equipment, Materials and Scientific and Technological Information

According to the first part of paragraph 2 of Article IV :

"All the Parties to the Treaty undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy."

In contrast with paragraph one of Article IV, this part of paragraph two was only finally shaped during the last phase of the NPT's formulation at the UN General Assembly's twenty-second resumed session in 1968. Article IV in the first identical drafts of August 1967 spoke only of "the right of the Parties to participate in the fullest possible exchange of information." Upon a Mexican proposal,⁶⁹ Article IV of the January 18 identical treaty drafts spoke of "the right to participate in the fullest possible exchange of scientific and technological information ..."⁷⁰ In the final treaty draft formulated in New York, the undertaking to facilitate was added to the right to participate, and the exchange of equipment and materials was added to the exchange of scientific and technological information, in partial compliance with previous Nigerian and Italian amendments respectively.⁷¹

(a) The Obligation to Facilitate and the Right to Participate in the Fullest Possible Exchange

When the Nigerian representative to the ENDC twice introduced his amendment to Article IV, the intention was to replace

69 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 12 (ENDC/196, 19 Sept. 1967).

70 See Appendix 3-E.

71 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 36 (ENDC/220, 28 Feb. 1968) and Sec. 37 (ENDC/220/Rev. 1, 14 Mar. 1968 (Nigeria)); and Sec. 34 (ENDC/218, 20 Feb. 1968 (Italy)).

the words "have the right to participate" with the words "undertake to facilitate".⁷² The result was the insertion of the latter without eliminating the former. The Nigerian delegation found that participation postulates a dialogue and not a monologue and hence failed to see "how the right accorded in that clause to the parties who may want to ask questions can be exercised if the participation of those parties who will make the right meaningful is not guaranteed."⁷³

The United States at the beginning saw no need to accept the Nigerian amendment. It was noted that the second part of paragraph 2 establishing the obligation of the parties to cooperate in contributing to the further development of the applications of nuclear energy for peaceful purposes should not be overlooked. Moreover, it was considered that an obligation expressed in a provision of this nature must of necessity be a general one.⁷⁴ Later, when the United States introduced the last formulation of Article IV, its representative to the First Committee of the General Assembly commenting on the words "the right to participate in" and "undertake to facilitate", made the following significant statement :

"... the right to such sharing is recognized explicitly not only as a right of non-nuclear Powers but also as a commitment to action by nuclear Powers and all others in a position to contribute thereto."⁷⁵

The balance was thus established between the rights of the non-nuclear-weapon States and the commitment to action by the

72 Ibid., Sec. 37 (ENDC/220 and 220/Rev. 1, 14 Mar. 1968).

73 ENDC/PV. 371, 28 Feb. 1968, para. 9.

74 ENDC/PV. 378, 13 Mar. 1968, para. 4.

75 A/C.1/PV. 1577 (prov.), 31 May 1968, p. 77. Before the insertion of the words "undertake to facilitate" in the final text, Mexico had suggested to add the "right to access" to the "right to participate" in order to make more precise the meaning of the first part of paragraph 2. See A/C.1/PV. 1569 (prov.), 16 May 1968, p. 31.

nuclear-weapon States as well as by others in a position to contribute. This led some countries to consider that the exchange did not necessarily imply reciprocity.⁷⁶ For others, like Australia and Canada, what was intended was not a programme of unlimited gifts and grants, but genuine co-operative efforts with divided responsibilities.⁷⁷

The words "fullest possible exchange" were interpreted by Dr. Glenn Seaborg, the then Chairman of the US Atomic Energy Commission, in a statement before the Senate Committee on Armed Services, as implying that "the parties will be expected to co-operate only to the extent that they are in a position to do so, and that reciprocity may well be a factor in determining what may be done in certain circumstances."⁷⁸

In the light of those statements and explanations it is reasonable to conclude that more is expected on the part of the nuclear-weapon States and advanced non-nuclear-weapon States towards the other non-nuclear-weapon States. The situation, however, gets more complicated if it is realised that the advanced non-nuclear-weapon States themselves expect much more from the nuclear-weapon States in certain branches of the peaceful uses of nuclear energy as will be further explained below.

(b) The Exchange of Equipment and Materials

In introducing the addition of the words "equipment" and "materials" to the text of Article IV, the US representative to the First Committee of the General Assembly acknowledged that this change corresponded to a view strongly voiced by the representative of Italy and others.⁷⁹ The Italian representat-

76 For example, see A/C.1/PV. 1577 (prov.), 31 May 1968, p. 32 (Jamaica).

77 Lawrence Scheinman, "Nuclear Safeguards, the Peaceful Atom, and the IAEA", International Conciliation, No. 572, Mar. 1969, p. 55.

78 Hearings on Military Implications of NPT, p. 86.

79 A/C.1/PV. 1577 (prov.), 31 May 1968, p. 77.

ive to the same committee was in fact referring to a previous amendment submitted by his delegation to the ENDC.⁸⁰

At the ENDC, after the introduction of the January 1968 identical treaty drafts, Italy proposed to insert a new paragraph after paragraph 1 of Article IV which read as follows :

"2. Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the supply of source and special fissionable materials or equipment for the use of source and special fissionable materials for peaceful purposes."⁸¹

In introducing the proposal, the Italian representative explained that to make it possible for the good intentions expressed in Article IV to attain their full practical scope, the non-nuclear-weapon States must be sure that they could rely at all times on access to the supply of raw materials - a supply which alone would, in practice, give access to the world of modern science and technology.⁸²

The Italian proposal received wide support from non-nuclear-weapon States.⁸³ The United States at the beginning was of the view that the undertaking in the second part of paragraph 2 of Article IV on co-operation would include the supply of nuclear materials for peaceful purposes. Moreover, reference was made to paragraph 3 of Article III on safeguards prescribing that the safeguards shall avoid hampering the economic or technological development of the parties or international

80 A/C.1/PV. 1565 (prov.), 10 May 1968, p. 47.

81 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 34 (ENDC/218, 20 Feb. 1968). Source and special fissionable materials are defined in Article XX of the IAEA Statute.

82 See ENDC/PV. 367, 20 Feb. 1968, para. 57.

83 For example, see ENDC/PV. 374, 6 Mar. 1968, para. 16 (India); A/C.1/PV. 1566 (prov.), 13 May 1968, p. 83 (Pakistan); A/C.1/PV. 1570 (prov.), 17 May 1968, p. 22 (Tanzania); and A/C.1/PV. 1572, 22 May 1968, paras. 90-91 (Argentina).

co-operation in the field of peaceful nuclear activities, including the international exchange of nuclear material and equipment.⁸⁴

The insertion of the words "equipment" and "materials" in Article IV was a partial answer to a more elaborate Italian proposal. But before that insertion had taken place, to satisfy the preoccupations of Italy and others, a new preambular paragraph was added to the resolution of the UN General Assembly commending the final treaty draft which reads as follows :

"... pursuant to the provisions of the treaty, all signatories have the right to engage in research, production and use of nuclear energy for peaceful purposes and will be able to acquire source and special fissionable materials, as well as equipment for the processing, use and production of nuclear material for peaceful purposes".⁸⁵

The Italian interest at the ENDC with respect to special fissionable materials, dates back to 1 August 1967 when Mr. Amintore Fanfani, the then Minister for Foreign Affairs of Italy, put before the Conference a proposal for the supply of fissionable materials.⁸⁶ The essence of the proposal was that nuclear-weapon States, in order to strike a balance with the obligations imposed by a non-proliferation treaty on the non-nuclear-weapon States, should commit themselves to transfer to the latter certain amounts of fissionable material - to be

84 ENDC/PV. 378, 13 Mar. 1968, paras. 12-14.

85 See Appendix 3-G. The resolution adopted was the revised draft submitted on 28 May 1968, three days before the presentation of the revised treaty text. A/C.1/L.421/Rev. 2, 28 May 1968.

86 ENDC/PV. 318, 1 Aug. 1967, paras. 14-21. Mr. Fanfani's proposal was later incorporated in a working paper submitted by the Italian delegation to the ENDC. The text is similar to Mr. Fanfani's statement before the ENDC. See DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 22 (ENDC/205, 30 Nov. 1967). The proposal should not be confused with the other "Fanfani Proposal" submitted on 29 July 1965 to the ENDC concerning the unilateral non-acquisition declaration. See note 96 in Chapter 3.

taken from military stockpiles - at a reduced price, it being understood that part of the amount paid would devolve to a UN fund for the progress of developing countries.⁸⁷ An expanded version of the proposal was later circulated to the Conference of Non-Nuclear-Weapon States as a working paper.⁸⁸

The objective that Italy wished to attain was three-fold : to take a positive step towards partial disarmament by releasing an amount of fissionable material destined for military purposes; to guarantee a flow of fissionable materials for the peaceful uses of nuclear energy in the non-nuclear-weapon States at a lower price than their market value; and to help the developing countries in their economic progress by creating a UN fund to support projects for the practical application of nuclear energy.

The "Fanfani Proposal" was highly praised but was never seriously examined at the ENDC due to the fact that the latter was very much involved in late 1967 and early 1968 in drafting the NPT. The Italian proposal on "equipment" and "materials" might have been considered as a more tangible proposition to secure a free flow of fissionable materials than a more complex scheme entailing a disarmament measure and an economic venture. On the other hand, discussions at the ENDC were also taking place on measures of disarmament and arms control, in the context of the NPT or connected with it, more drastic than the modest transfer of fissionable materials from military to peaceful uses.

Nevertheless, the "Fanfani Proposal" had the effect of instigating another ambitious scheme at the Conference of Non-Nuclear-Weapon States and that is the proposal to establish a

⁸⁷ A/C.1/PV. 1565 (prov.), 10 May 1968, p. 46 (Italy).

⁸⁸ A/CONF/35/C.2/3, 12 Sept. 1968. See also A/CONF. 35/C.2/SR.6, 12 Sept. 1968, p. 49.

"Fund of Special Fissionable Materials".⁸⁹ The Italian zeal for securing fissionable materials, manifested by its two consecutive proposals, stems from Italy's own special requirements. It also reflects the preoccupations of other countries, and more particularly the industrialized countries of Europe and Japan, which have similar requirements.

In Italy, the limit of expansion has been reached in the resources of hydro-electric power. Coal and oil are totally has been mitigated by the use of natural gas and the importation of fuel from abroad. The difficulties that Italy had experienced in providing itself with German coal during the Second World War were not easily forgotten.⁹⁰ Hence, the keen Italian interest in nuclear energy. In 1957, Italy started a nuclear power-station programme which by 1978 had led to the construction of four power reactors, three of which are based on American designs using enriched uranium.⁹¹ By 1984, it is expected to have a total of 7 power reactors.⁹² This programme would at least prevent or lessen the growth of oil imports whose prices are constantly increasing. But at the same time, it would mean increasing dependence on nuclear fuel and especially enriched uranium which is produced predominantly by the United States.⁹³ Therefore, securing a continuous flow of enriched

89 See Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution J (B) and (C), p. 17.

90 See Also Cussuto, "Competition in Nuclear Energy: International Issues", The World Today, Vol. 20, No. 7, July 1964, pp. 281-283. Cussuto mentions that Italian requirements of solid fuel were guaranteed by means of continuous dispatch by rail of coal from the Ruhr and the Silesian coalfields. Some 100 trains were running a day from North to South and South to North.

91 See Power Reactors in Member States (Vienna: IAEA, 1979), p. 40. They became critical in December 1962, June 1963, June 1964 and December 1977.

92 Ibid., p. 80.

93 The three American gaseous diffusion plants, operating at full capacity, are estimated to be capable to produce 17.1 million separative work units (SWU) of enriched uranium

uranium becomes primordial not only for Italy but also for other countries which have largely invested in power reactors using enriched uranium.

The dominant American position is a source of concern not only because it entails complete dependence in a vital economic sector with all its possible future political ramifications, but also because there is no guarantee that the US would be able to cope with future rising demands for enriched uranium.

The US Nuclear Non-Proliferation Act of 1978, previously referred to, has dramatically amplified the above concern not only with regard to the supply of nuclear material but also of equipment and technology. Apart from the burdensome fact that all countries have to renegotiate their nuclear co-operation agreements with the United States in order to bring them in line with the provisions of the new law, the Act, for example, imposes certain restrictions on the export of sensitive nuclear facilities or technologies, the latter being defined as any unavailable information to the public relating to the design, construction, fabrication, operation or maintenance of a facility used for uranium enrichment, nuclear fuel reprocessing or heavy water production.

The United States has even decided for the time being not to export sensitive facilities and technologies. The new or

annually while the British facility at Capenhurst has only the capacity of 400.000 SWU and the French Pierlatte plant a capacity ranging between 200.000 and 300.000 SWU a year which in both cases can meet domestic needs. A "separate work unit" is a measure of the effort expended in a nuclear plant to separate a quantity of uranium of a given assay into two components, one having a higher percentage of uranium-235 and one having a low percentage. Separative work is generally expressed in kilogram units to give it the same dimensions as material quantities. See Lawrence Scheinman, "Security and a Transnational System: The Case of Nuclear Energy", International Organization, Vol. XXV, No. 3, Summer 1971, p. 640. The 17 million SWU are equivalent to 4.000 tons of 3 per cent uranium-235. A typical 1.000 MW light-water reactor consumes about 40 tons of such fuel per year. See Victor Gilinsky and Bruce L.R. Smith, "Civilian Nuclear Power and Foreign Policy", Orbis, Vol. XII, No. 3. Fall 1968, p. 821.

renegotiated co-operation agreements would stipulate that the latter would not be transferred unless the agreements are specifically amended to provide for them. Paradoxically, this obvious over concern with the proliferation of nuclear weapons runs counter to the letter and spirit of Article IV of the NPT and more specifically with the pledges undertaken in its second paragraph.

To diversify their sources, three different courses are being followed by the industrialized countries of Western Europe, and Japan: the establishment of multinational European projects for enriching uranium, bilateral projects in which the United States play a part and toll enrichment or buying enriched uranium in the Soviet Union.

In Europe, two multinational projects are competing with each other. The first is the "Europe diffusion" (Eurodif) based on the gaseous diffusion method favoured by France. The Eurodif plant is located in the latter at Tricastin. By 1981, the plant is expected to be capable of producing 10.8 million SWU of enriched uranium annually. The other partners of France are Belgium, Iran, Italy and Spain.⁹⁴ The Netherlands and the United Kingdom withdrew from the Eurodif on 30 April 1973 followed by the FRG ten days later. Sweden also withdrew in March 1974.⁹⁵ The Netherlands, the UK and the FRG seem to have definitely opted for the centrifuge method they are developing together as previously referred to in this Chapter.⁹⁶ This competition put the Commission of the European Communities in a very difficult position. It seems that the Commission, being

94 See J. F. Petit, "Enrichissement de l'uranium par le procédé de diffusion gazeuse" (UAEA-CN-36/323) in Nuclear Power and its Fuel Cycle, Vol. 3, pp. 111-126 and Pedersen, loc. cit. Revolutionary Iran has tried to withdraw its ten per-cent share in Eurodif, but the Court of Paris on 22 November 1979 having found that such withdrawal would incur a 2 billion dollar loss, has ordered the blockage of that amount as a preliminary measure.

95 Le Monde, 12 May 1973 and 22 March 1974.

96 See note 30 above.

in favour of a rapid establishment of a European uranium enrichment plant, first supported indirectly the classical method of gaseous diffusion. It later favoured the two projects, provided they developed in concert in order to avoid a premature over-production.⁹⁷

Japan has shown considerable interest in various projects for the construction of a multinational plant for enriching uranium. It has also built a pilot enrichment unit at Tokai-Mura.⁹⁸

Several Western European countries are in the course of buying enriched uranium from the Soviet Union, or sending their uranium there to be enriched (toll enrichment) in the two isotopic separation plants they are known to have. France and the Soviet Union, on 15 March 1971, signed an agreement under which the Soviets were to enrich French uranium for a nuclear power reactor which was being built in the Alsace.⁹⁹ At the end of the visit of the Soviet Prime Minister, Mr. Alexei Kosygin, to Sweden in April 1973, it was revealed that Sweden would enrich its uranium in the Soviet Union.¹⁰⁰ At that time, Switzerland was envisaging buying enriched uranium from the Soviet Union.¹⁰¹ The Supply Agency of Euratom and a German delegation were also

97 Le Monde, 12 May and 21 Nov. 1973. The joint communiqué issued by the Heads of State or Government of the nine countries members of the EEC, at their December 1973 summit conference in Copenhagen, has underlined the importance of a concerted and harmonious development of the existing projects. Le Monde, 18 Dec. 1973.

98 Richard Ellingworth, "Japanese Economic Policies and Security", International Institute for Strategic Studies (London), Adelphi Papers, No. 90, Oct. 1972, p. 26; Pederson, loc. cit., p. 45; and IAEA, The Annual Report for 1978 (GC(XXIII)/610), p. 55.

99 International Herald Tribune, 16 March 1971.

100 Le Monde, 7 April 1973.

101 Ibid.

negotiating in Moscow the purchase of enriched uranium for a German firm.¹⁰²

In Eastern Europe, the enriched uranium is provided by the USSR for the power reactors built by the latter. The Soviet Union has not yet developed the technology of power reactors using natural uranium. The uranium ore which exists in great quantities in Czechoslovakia is sent to the Soviet Union where it is enriched in the two isotopic separation plants. Among the Eastern European countries, Romania was the first country to try to diversify its peaceful nuclear activities by applying to purchase two reactors from Western Europe and the United States. Like Czechoslovakia, it was more interested in reactors of the natural uranium type which would allow for more autonomy from the Soviet Union.¹⁰³

In the developing countries, the problem of securing enriched uranium has started to gain considerable attention. Two developing countries are already known to have ambitious schemes entailing the construction of enrichment facilities, namely Brazil and Pakistan; the former in the context of a nuclear co-operation agreement with the FRG and the latter indigenously by importing discretely the necessary equipment. We shall revert to both experiences at a later stage of this study. However, it must be pointed out that the immediate preoccupations of the developing countries are related to other aspects of the peaceful atom as will be shown below.

102 Ibid., 11 Apr. 1973, p. 10. All orders of enriched uranium for the 9 members of Euratom should be placed through the Supply Agency which was given an exclusive right to "conclude contracts relating to the supply of ores, source material and special fissionable material originating within the Community or outside it." (Euratom Treaty, Article 52). UNTS, Vol. 298, No. 4301, p. 159.

103 For more details, see Jürgen Nötzold, "Nuclear Energy in East Europe", Europa-Archiv, No. 21, 1967 in Survival, Vol. X, No. 3, Mar. 1968, pp. 91-96 and Jaroslav G. Polach, "Nuclear Energy in Czechoslovakia : A Study in Frustration", Orbis, Vol. XII, No. 3, Fall 1968, pp. 831-851.

The Conference of Non-Nuclear-Weapon States urged the nuclear-weapon States "to facilitate, to the fullest extent possible, the availability of fissionable materials for the peaceful nuclear programmes of the non-nuclear-weapon States accepting the application of safeguards as envisaged in Article III of the Treaty". It further recommended that the IAEA "study the most effective means of ensuring access to special fissionable materials on commercial basis". The Conference also requested the General Conference of the IAEA to consider the establishment of a "Fund of Special Fissionable Materials".¹⁰⁴

At the 1975 Review Conference of the Parties to the NPT, it has been recognized that there continued to be a need for the fullest possible exchange of nuclear materials, equipment and technology, including up-to-date developments, consistent with the objectives and safeguards requirements of the NPT. In its "Final Declaration" the Conference has also recognized that regional or multinational nuclear fuel cycle centres (with fuel fabrication facilities, plutonium reprocessing plants, and waste management and storage facilities) might be an advantageous way to satisfy, safely and economically, the needs of many states in the course of initiating or expanding nuclear power programmes, while at the same time facilitating physical protection and the application of IAEA safeguards, and contributing to the goals of the Treaty. IAEA studies in this area have been welcomed and encouraged to continue expeditiously as possible.

Access to modern nuclear technology for peaceful purposes has also continued to be an important subject matter of consecutive resolutions adopted by the UN General Assembly. At its Tenth Special Session devoted to disarmament held in 1978 and its Preparatory Committee, many developing countries voiced concern about recent restrictive trends in the area of nuclear exports. In order to arrive at a consensus in drafting the "Final Document", the relevant paragraphs were formulated in

104 See Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolutions H (III), p. 14, and J (B) and (C), p. 17.

general terms. The "Final Document" has emphasized, inter alia, that all States should have access to and be free to acquire technology, equipment and materials for the peaceful uses of nuclear energy. It has also stated that each country's choices and decisions in the field of peaceful uses of nuclear energy should be respected without jeopardizing their respective fuel cycle policies or international co-operation, agreements or contracts. In this respect, it is quite significant that the emphasis at the UN General Assembly has been put on the nations' respective fuel cycle policies without specifically mentioning multinational or regional fuel cycles, an idea which, in fact, has not yet captured the imagination and enthusiasm of the developing countries.

Under this chapter, we shall have ample opportunity to examine the implementation of the results of all these meetings.

(c) The Exchange of Scientific and Technological Information

The exchange of scientific and technological information in the text of Article IV raised a few interesting interpretations and brought to the fore the question of divulging the secret techniques of enriching uranium, techniques so far kept under the strict control of the nuclear-weapon States.

The Nigerian representative at the ENDC considered that the first part of paragraph 2 of Article IV could be said to cover the exchange of information obtained during research on nuclear explosive devices (the so-called spin-off).¹⁰⁵ The US representative at the ENDC confirmed that the paragraph covered the exchange of information on the peaceful applications of nuclear explosions.¹⁰⁶

The representative of Pakistan at Committee Two of the Conference of Non-Nuclear-Weapon States also considered that access to scientific institutions and establishments in the advanced nuclear-weapon and non-nuclear-weapon States by the other non-nuclear-weapon States, particularly those of Africa,

105 ENDC/PV. 371, 28 Feb. 1968, para. 10.

106 ENDC/PV. 378, 13 Mar. 1968, paras. 5-6.

Latin America and Asia, came within the definition of "scientific and technological information".¹⁰⁷ The Conference adopted a resolution in this respect, the only operative paragraph of which reads as follows :

"Requests all nuclear-weapon States and those non-nuclear-weapon States which are in a position to do so, to provide access for students and scientists for purposes of training and acquisition of knowledge on a non-discriminatory basis to their scientific institutions and nuclear establishments engaged in research and development of the peaceful uses of nuclear energy."¹⁰⁸

The question which is of immediate concern to the advanced non-nuclear-weapon States is not only the free flow of fissionable materials (as previously shown), but also the techniques of enriching uranium and building power reactors. Spain's representative at Committee Two of the Conference of Non-Nuclear-Weapon States, for example, considered that the fact that the nuclear-weapon States kept the information relating to the processing of slightly enriched uranium to themselves was contrary to the spirit of Article IV.¹⁰⁹

On the question of divulging the secrets of uranium enrichment, Switzerland had played an instigating role at the Conference. Considering that the balance of obligations between nuclear-weapon and non-nuclear weapon States in the matter of nuclear technology must be achieved by precise undertakings entered into by the former, the Swiss draft had rated in the first place the "effective access to advanced nuclear technology, including that hitherto kept secret, and in particular that relating to uranium enrichment".¹¹⁰

107 A/CONF.35/C.2/SR.4, 10 Sept. 1968, p. 27.

108 Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution M, p. 19.

109 A/CONF.35/C.2/SR.17, 25 Sept. 1968, p. 178.

110 A/CONF.35/C.2/L.1, 12 Sept. 1968.

The Swiss delegation to the Conference had accepted, however, to co-sponsor a seven-power draft resolution with Austria, Denmark, Finland, Japan, Norway and Sweden.¹¹¹ The draft, which was adopted by the Conference as resolution H, merely invited the nuclear-weapon States to advise the IAEA at regular intervals as to "the possibility of their declassifying scientific and technical information which has become essential for the development of the peaceful uses of nuclear energy, as soon as there is no longer any reason for its classification on national security grounds, bearing in mind all the benefits to be derived from the dissemination of scientific knowledge."¹¹²

The same resolution also called upon the IAEA to continue its utmost efforts for "compilation and dissemination of public information concerning the peaceful uses of nuclear energy, including those related to the peaceful application of nuclear explosions." It further recommended the IAEA to "study appropriate international arrangements to facilitate exchange of scientific and technical information which have commercial or industrial value and are not publicly available, so as to make it possible for the countries with interest to know of the existence and outline of such information and to enable the interested parties to enter into negotiations about the acquisition of such information with the owners thereof".¹¹³

The effect of the Conference on the nuclear-weapon States with respect to divulging the secret techniques of uranium enrichment was not apparent. It seems that it was rather the centrifuge project sponsored by the FRG, the Netherlands and the United Kingdom which was effective in prompting the United States, in October 1970, to show signs of readiness to share

111 A/CONF.35/C.2/L.4/Rev. 2, 24 Sept. 1968.

112 Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution H (I), p. 14.

113 Ibid.

its knowledge of gaseous diffusion with Western European countries, Canada, Australia and Japan.¹¹⁴ However, the United States which has joined some of those countries in establishing the so-called London Suppliers' Group, has decided, as previously pointed out, not to divulge for the time being any unavailable information to the public relating to design, construction, fabrication, operation or maintenance of uranium enrichment, nuclear fuel reprocessing or heavy water production facilities.¹¹⁵

Going back to the Conference of Non-Nuclear-Weapon States, it is to be noted that the interest in the exchange of equipment, materials and scientific and technological information was most apparent in the attitudes of Japan and the advanced non-nuclear-weapon States of Europe. Japan and six European States in fact co-sponsored Resolution H which included all the recommendations referred to above and pertaining to the exchange of materials and information. This does not mean that the "exchange" received little interest on the part of the developing countries. On the contrary, it might represent to the least developed of the developing countries the first step in learning the nuclear alphabet. But as one writer notes, "no matter how widely disseminated scientific information may be, relatively few states have the industrial infrastructure adequate to the task of translating this scientific and technological knowledge into an operational nuclear program."¹¹⁶ The right to know, however, will continue to be reckoned with, as it has also been demonstrated at the first NPT Review Conference and the UN General Assembly.

114 International Herald Tribune, 24-25 Oct. 1970, and 31 July-1 Aug. 1971.

115 See Ronald J. Bettauer, "The Nuclear Non-Proliferation Act of 1978", Law and Policy in International Business, Vol. 10, No. 4, 1978, pp. 1157-1158.

116 Scheinman, "Security and a Transnational System : The Case of Nuclear Energy", p. 637.

2. Co-operation in Contributing to the Further Development of the Applications of Nuclear Energy for Peaceful Purposes

Article IV of the identical treaty drafts of 24 August 1967 included the right of the Parties "to contribute alone or in co-operation with other States to the further development of the applications of nuclear energy for peaceful purposes."¹¹⁷ The identical treaty drafts of 18 January 1968, in partial compliance with a Mexican proposal,¹¹⁸ transformed this right into an obligation in the second part of paragraph 2 which reads : "Parties to the Treaty in a position to do so shall also co-operate in contributing alone or together with other States or international organizations to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States Party to the Treaty."¹¹⁹ In the final text of the Treaty, as formulated at the UN General Assembly, the phrase "with due consideration for the needs of the developing areas of the world" was added at the end of the paragraph to meet certain considerations raised by Chile in the First Committee of the General Assembly with regard to the needs of the less developed countries in the field of nuclear energy.¹²⁰

In analysing this second part of paragraph 2 of Article IV, we shall first address ourselves to the definition of the "Parties to the Treaty in a position to ... co-operate in contributing" to the further development of the applications of nuclear energy for peaceful purposes. Secondly, we shall address ourselves to the beneficiaries or the recipients of the obligation, i.e., the non-nuclear-weapon States, and more parti-

117 See Appendix 3-D.

118 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Sec. 12 (ENDC/196, 19 Sept. 1967).

119 See Appendix 3-E.

120 A/C.1/PV.1569 (prov.), 16 May 1968, pp. 71-75.

cularly the developing countries. Lastly, we shall deal with the obligation itself : "to ... co-operate in contributing ..."

(a) The Contributing States

Paragraph 2 of Article IV introduces, as pointed out by one writer, a new category of States, broader than nuclear-weapon States and narrower than non-nuclear-weapon States, which he calls the "contributing states".¹²¹ In a previous Nigerian working paper, the obligation to co-operate was incumbent on each Party to the Treaty.¹²²

The Soviet representative at the ENDC, commenting on paragraph 2 of Article IV, said that :

"The purport of this provision is that States which have achieved the highest level of development in the use of atomic energy for peaceful purposes, and in the first place the nuclear Powers, shall contribute to the development of the peaceful atomic activities of non-nuclear-weapon States."¹²³

There was certainly no doubt that the nuclear-weapon States were viewed in the first place as "contributing States".¹²⁴ As far as non-nuclear-weapon States are concerned, those of them advanced in nuclear technology were considered to fall within the new category. There are in fact different levels of nuclear progress. One country's representative had roughly classified the non-nuclear-weapon States into two distinct groups : those with, and those without, the capacity and technical skills required to maintain a programme of peaceful uses of nuclear energy. The first group was termed the non-nuclear-weapon States and the latter the non-nuclear States, the distinction

121 Willrich, Non-Proliferation Treaty, p. 130.

122 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 18 (ENDC/202, 2 Nov. 1967), paragraph 1 of Article IV-A.

123 ENDC/PV. 366, 16 Feb. 1968, para. 10. See also A/C.1/PV. 1571 (prov.), 20 May 1968, p. 18.

124 For example, see A/C.1/PV. 1562 (prov.), 7 May 1968, pp. 8-10 (Denmark) and A/C.1/PV. 1630 (prov.), 5 Dec. 1968, p. 51 (Mexico).

corresponding roughly to that between "developed and under-developed countries".¹²⁵ But the question still remains - which are the countries advanced in the nuclear field ? What are the criteria for being advanced ?

Past practice in the application of Article VI of IAEA's Statute relating to the composition of the IAEA Board of Governors might be the most indicative in identifying the most advanced States in the field of nuclear energy. Practice has demonstrated that the five members of the IAEA most advanced in the technology of atomic energy and thus designated as members of the Board were Canada, France, USSR, United Kingdom and the United States. None of these States have been replaced or challenged as members of the Board. The other members, designated by the early Board as the most advanced in their regions, were Brazil in Latin America, South Africa in Africa and the Middle East, India in South Asia, Australia in South East Asia and the Pacific, and Japan in the Far East.¹²⁶ Over the years these designations were challenged.¹²⁷ However, the

125 A/CONF.35/SR.11, 11 Sept. 1968, p. 146 (Jamaica).

126 Article VI before being amended in 1970 stipulated in its paragraph A.1 that the outgoing Board "shall designate for membership on the Board the five members most advanced in the technology of atomic energy including the production of source materials and the member most advanced in the technology of atomic energy including the production of source materials in each of the following areas not represented by the aforesaid five : (1) North America (2) Latin America (3) Western Europe (4) Eastern Europe (5) Africa and the Middle East (6) South Asia (7) South East Asia and the Pacific (8) Far East."

127 See Paul C. Szasz, The Law and Practices of the International Atomic Energy Agency (Vienna : IAEA, 1970), pp. 144-151. Article VI before being amended in 1970 had also empowered the outgoing Board to designate for one year two members from among Belgium, Czechoslovakia, Poland and Portugal as other producers of source materials. The Board had also the right to designate one other member for one year as a supplier of technical assistance. This thirteenth designated seat used to rotate among the Scandinavian countries.

status of the aforementioned ten members was re-confirmed in the first Board constituted after the entry into force, on 1 June 1973, of the 1970 amendment of Article VI, an amendment which broadened the membership of Board.¹²⁸

A Panel of Experts appointed to the IAEA Board to examine Argentina's challenge to Brazil, though unable to determine which of the two was more advanced, took into account certain fields which could be useful as a criterion not only for the designation of the members of the Board under Article VI of the IAEA Statute, but also in determining the level of advancement in general.¹²⁹

In conclusion, we must say that although the designated members of the IAEA Board, according to the amended Article VI of IAEA Statute, are to be considered the most advanced countries in the technology of atomic energy, the question of identifying the "contributing States" in the context of Article IV of the NPT will remain a relative one. The paradox is that a country designated as a member of the IAEA Board as the most advanced in its region can be considered much less advanced than other designated members and therefore qualifies not only as a "contributing State" but also as a beneficiary. On the other hand, a non-designated member of the IAEA Board may qualify as a "contributing State" if its level of advancement is much higher than other States seeking its co-operation. In practice, paragraph 2 of Article IV might raise a complex set of relationships.

This conclusion is borne out by the membership of the London Suppliers' Club totalling sixteen States, only four of which are self-sufficient in the field of nuclear technology and materials, while the others are suppliers and recipients of such technology. The members of the group are Australia, Belgium, Canada, Czecho-

128 See section IV-3(a) below.

129 Paul C. Szasz, op.cit., pp. 144-145.

slovakia, France, the FRG, the GDR, Italy, Japan, the Netherlands, Poland, Sweden, Switzerland, UK, US and the USSR.

(b) The Beneficiaries

Paragraph 2 of Article IV stipulates that co-operation in contributing to the further development of the applications of nuclear energy for peaceful purposes shall be "especially in the territories of non-nuclear-weapon States Party to the Treaty, with due consideration for the needs of the developing areas of the world." (Emphasis added.)

The first question which arises in this respect is the following : Do the beneficiaries of co-operation according to Article IV have to be Parties to the Treaty ? Basing ourselves on the interpretations given by the original co-authors, on the interpretation of the text itself in conjunction with the IAEA Statute as well as on a specific experience at the Conference of Non-Nuclear-Weapon States, the answer must be that co-operation is not limited to the Parties only. However, non-parties will have to comply with a minimum standard of behaviour.

To be more specific, the representative of the Soviet Union to the ENDC did not discard the possibility of co-operating with non-parties. He explained that "those who adopt a positive attitude towards the treaty and become parties to it will enjoy a greater degree of confidence in the development of co-operation in the nuclear field, in the field of the peaceful use of nuclear energy."¹³⁰ (Emphasis added.) US Secretary of State, William Rogers, asked by one Senator, at the hearings held on the NPT before the Senate Committee on Foreign Relations, if there was any distinction made in the NPT or intended by it concerning nuclear co-operation with those who sign it and

130 ENDC/PV. 366, 16 Feb. 1968, para. 24.

those who do not sign it, answered in the negative, saying that he did not think the Treaty provided that.¹³¹

The word "especially" in the text of Article IV seems to confirm that co-operation will be more particularly and not exclusively with those who have adhered to the NPT. Any other interpretation of the text of Article IV would be in conflict with the IAEA Statute which applies to all IAEA members regardless of whether they are parties to a certain agreement or not.¹³²

At the Conference of Non-Nuclear-Weapon States, Pakistan had introduced a draft resolution which urged all States which were in a position to do so, not to provide any nuclear assistance to any non-nuclear-weapon State that had not signed the NPT nor subscribed to it, nor renounced the production, acquisition and use of nuclear weapons according to an instrument having the mandatory force of law, nor entered into a safeguard agreement.¹³³ The Pakistani proposal seemed to have been aimed at India which raised a series of objections to the NPT. The draft resolution was revised three times,¹³⁴ but was objected to by several countries including India as being discriminatory and restrictive. India's representative noted that "(i)t

131 Hearings on NPT, 1969, p. 362. Followed immediately by Mr. Adrian Fisher, the US disarmament negotiator, the latter explained that "there might be a greater or a readier degree of cooperation" with the adherents to the Treaty. Ibid., p. 363.

132 Fears of discrimination within the IAEA between parties and non-parties to the NPT were expressed by some States. See A/CONF.35/C.2/SR.5, 11 Sept. 1968, pp. 39-41 (Ghana); A/CONF.35/C.2/SR.13, 23 Sept. 1968, p. 136 and A/C.1/PV. 1702 (prov.), 27 Nov. 1969, pp. 44-45 (Zambia); and A/C.1/PV. 1703 (prov.), 28 Nov. 1969, pp. 64-65 (Algeria).

133 A/CONF.35/C.2/L.3, 16 Sept. 1968. See also A/CONF.35/C.2/SR.4, 10 Sept. 1968, p. 28 and A/CONF.35/C.2/SR.6, 12 Sept. 1968, pp. 57-58.

134 A/CONF.35/C.2/L.3/Rev. 1, 23 Sept. 1968; Rev. 2, 24 Sept. 1968; and Rev. 3, 25 Sept. 1968.

would be the first time that the developing countries themselves had fixed restrictions for technical assistance and access to scientific institutions and establishments."¹³⁵ The draft resolution in its last version was mutilated in the voting process and merely provided access for students and scientists to the scientific institutions and nuclear establishments of the nuclear-weapon States and the advanced non-nuclear-weapon States (Resolution M previously referred to above).¹³⁶ The Pakistani experience indicates that future co-operation is not viewed as necessarily being tied up with the status of being a party or not to the NPT.

However, in one Conference resolution, Resolution H, the nuclear-weapon States were urged "to facilitate, to the fullest extent possible, the availability of fissionable materials for the peaceful nuclear programmes of the non-nuclear-weapon States accepting the application of safeguards as envisaged in Article III of the Treaty".¹³⁷ (Emphasis added.) It is quite legitimate in this case to apply IAEA safeguards on all transfers of fissionable materials to non-nuclear-weapon States whether they are parties or not to the NPT. Co-operation with non-parties without such safeguards might be a step towards nuclear proliferation and it would constitute a serious discrimination against the complying States Party to the NPT.¹³⁸

135 A/CONF.35/C.2/SR.13, 23 Sept. 1968, p. 145. See also Canada's objections. Ibid.

136 See note 108. For the result of the vote on A/CONF.35/C.2/L.3/Rev. 3, see A/CONF.35/C.2/SR.17, 25 Sept. 1968, pp. 176-177.

137 Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution H (III), p. 14.

138 Indonesia, for example, expressed the view that no difference should be made between signatories and non-signatories prepared to submit themselves to the necessary safeguards. A/C.1/PV. 1628 (prov.), 3 Dec. 1968, p. 37.

At the first Review Conference of the Parties to the NPT, the developing countries called for a preferential treatment in favor of the Parties to the NPT in the supply of nuclear material, equipment and technology. Egypt which had signed but not yet ratified the NPT and which was entitled to attend the Review Conference as a signatory, objected to such a preferential treatment on the basis that it would be discriminatory and that it would create another division in the world community and further complicate international relations. The IAEA was, in fact, of the view that preferential treatment was unacceptable with regard to the Agency's technical assistance funds allocated to the members of the Agency without discrimination. The IAEA, however, was in favor of a preferential treatment in the field of concessionary financing to help meet the capital costs of nuclear plants. The three nuclear-weapon States Parties to the Treaty held an opposite view. They were in favor of preferences in the field of technical assistance but not in the field of export of nuclear installations or their financing.

The Review Conference in its "Final Declaration" reached a vague compromise formula which, inter alia, prescribed the provision of special assistance in the peaceful uses of nuclear energy for developing States Party to the NPT, and recommended that in reaching decisions on the provision of equipment, materials and services on concessional financial terms, States Party to the NPT should give weight to adherence to the Treaty by recipient States.

Following the NPT Review Conference, the United States announced that it would give preference to the Parties to the NPT in allocating the in-kind support it provides each year to the IAEA's regular technical assistance programme. Moreover, the United States announced in 1976 that henceforth it would give preference to the Parties to the NPT in allocating its annual \$50,000 dollars gift to the IAEA of special nuclear material. At the 1978 UN Special Session devoted to disarmament, the United States offered further benefits to the developing countries Parties of the NPT. The Soviet Union, the United Kingdom and Canada

made similar offers to be provided to the Parties to the NPT through the IAEA.¹³⁹

It is quite significant that all these measures have not touched upon co-operation with States not parties to the NPT in the field of export of nuclear installations; for example, the US Nuclear Non-Proliferation Act of 1978 does not preclude co-operation with non-parties to the NPT provided the latter accept international safeguards on all their nuclear activities.

In the last analysis, it is quite conceivable to say that non-parties to the Treaty must not expect, however, to be put on equal footing with the Parties in enjoying the full benefits of co-operation. If equality of treatment for both is felt, the latter might call into question their adherence to the NPT. If the Treaty is to have a meaningful advantage in the field of the peaceful uses of nuclear energy for those who adhere to it, some nuances in treatment could be established between the two categories without prejudicing the right of non-parties to develop research, production and use of nuclear energy for peaceful purposes.

A second question which arises is that paragraph 2 of Article IV speaks of territories of non-nuclear-weapon States and developing areas. Does this mean that the beneficiaries of co-operation will enjoy its advantages only in a regional set-up? Although the negotiating history of the NPT does not provide a clear answer to this question, the deliberate use of the words "territories" and "areas" would indicate at least a preference for co-operation to the benefit of not only one or more States but to a whole region. The choice of those words might

¹³⁹ See Preparatory Committee for the Second Review Conference of the Parties to the NPT, IAEA Activities under Article IV of NPT (NPT/CONF.II/PC.II/8, 25 July 1979), pp. 37-40. It should be pointed out that the guiding principles and general operating rules governing the provision of technical assistance by the IAEA do not discriminate between States Members of the Agency. See IAEA Doc. INF/CIRC/267, March 1979, reproduced in Appendix 24B.

have been proposed by the American negotiators. United States co-operation with Euratom might have influenced this trend towards regionalism. The United States had always shown interest and readiness to support certain nuclear projects on a regional basis such as the construction of combined nuclear power desalting plants in the Middle East.¹⁴⁰ The United States in its policy of nuclear regionalism is not only motivated by economic considerations, but also by security imperatives. Regional setups for peaceful nuclear co-operation allow each participating State to check the activities of others and to make sure that no diversion is being made from the peaceful to the military use of the atom. At any rate, due to the complexities of nuclear technology, regional co-operation is being intensified even among the most advanced States in this field.

In fact, it was at the initiative of the United States that the IAEA undertook the studies on establishing regional nuclear fuel cycle centres, and which were welcomed, as previously mentioned, by the 1975 NPT Review Conference. By 1977 the technical and economic studies were completed.¹⁴¹ At a future phase it would be possible to take up in-depth evaluation of any specific regional centre proposal.

The non-nuclear-weapon States to benefit most from co-operation are expected to be those less advanced in the nuclear field than other non-nuclear-weapon States which are "in a position" to play the role of "contributing States". The question of identifying these less advanced is a relative one exactly as in the case of the "contributing States".

As to the developing countries, which constitute a third category among the non-nuclear-weapon States, the question of definition is also a relative one. But before defining the

¹⁴⁰ Hearings on NPT, 1968, pp. 288-290.

¹⁴¹ Regional Nuclear Fuel Cycle Centres, Vol. I: Summary, 1977 Report of the IAEA Study Project and Vol. II: Basic Studies (Vienna: IAEA, 1977).

developing countries in the context of Article IV, let us first discuss the origin of the addition to that article of the phrase "with due consideration of the needs of the developing areas of the world".

At the twenty-second resumed session of the UN General Assembly in 1968, the representative of Chile suggested at the First Committee a greater flow of co-operation and contribution to the countries less developed in the nuclear field. In his view, "this is the natural way of avoiding discrimination among the parties to the treaty, discrimination which is banned by the treaty, for, if such discrimination were applied, those countries which already have the most would get even more."¹⁴² Accordingly, the above phrase was added to the text of Article IV.

In fact, the eight non-aligned members of the ENDC, in their joint memorandum on non-proliferation to the ENDC on 19 August 1966, had voiced together for the first time similar preoccupations. They trusted that in connection with a NPT, "intentions be explicitly stated that assistance of developing countries should be increased in order to help accelerate their programmes of development of atomic energy for peaceful purposes."¹⁴³

Both the United States and the Soviet Union stressed the importance of the addition.¹⁴⁴ The latter explained that "(a) particular importance ... will be had by the treaty for those developing countries which do not so far possess the resources for major independent work in the field of the use of nuclear

142 A/C.1/PV. 1569 (prov.), 16 May 1968, pp. 72-75.

143 DCOR, Suppl. for 1966, Doc. DC/228, Sec. P(ENDC/178, 19 Aug. 1966), para. 16.

144 A/PV. 1672 (prov.), 12 June 1968, pp. 36-40 (United States) and A/C.1/PV. 1577 (prov.), 31 May 1968, p. 71 (USSR).

energy for peaceful purposes, and which, because of this fact, require assistance from States more advanced in that regard."¹⁴⁵

Not one global definition of the developing countries is possible. The UN and the United Nations Conference on Trade and Development (UNCTAD) Secretariats have never adopted an official list of countries to be classified and treated as "developing".

A criterion which could be used for the purpose of the application of Article IV is the political grouping of developing countries called the "Group of 77" which derived its name from a joint declaration made by 77 countries at the first session of UNCTAD in 1964. With the newly independent countries the "Group of 77" includes more countries than the original 77.

In the specific case of the application of Article IV, two criteria, in our view, are most pertinent. The first is that developing countries could be defined as those countries for which a programme under the technical assistance component of the United Nations Development Programme (UNDP) had been approved by its Governing Council. This criterion had in fact been used by the IAEA in a study on financing of nuclear projects in developing countries.¹⁴⁶ Secondly, the International Bank for Reconstruction and Development (IBRD) includes in its annual report a table on selected economic indicators for developing and industrialized countries. The Bank criterion is specifically important with respect to financing nuclear power reactors in the developing countries as will be shown below.¹⁴⁷

The significance of emphasizing the needs of the developing areas in Article IV was best described by one delegate at the First Committee of the UN General Assembly as making for a more equitable balance of responsibilities and obligat-

145 Ibid.

146 See IAEA Doc. GC(XIV)/436, 19 Aug. 1970, Ann. I, p. 3.

147 See World Bank, Annual Report 1979, Table 1, pp. 130-131.

ions of the nuclear and non-nuclear-weapon States.¹⁴⁸ Furthermore, at the Conference of Non-Nuclear-Weapon States, there was a warning that "(t)he developing countries should not be turned into a nuclear market comparable to the old semi-colonial markets, in the sense that those countries would supply nuclear raw materials to the advanced States, from which they would acquire finished industrial products", thus widening the gap between the advanced and the developing countries and placing the latter in a state of nuclear dependency.¹⁴⁹ This brings us to the obligations incurred by the second part of paragraph 2 of Article IV, and more particularly to the main preoccupations of the non-nuclear-weapon States and especially the developing countries in the field of peaceful nuclear co-operation.

(c) The Obligation to Contribute

The original Mexican proposal upon which Article IV was principally based stipulated that :

"Those Parties that are in a position to do so, have the duty to contribute, according to their ability, alone or in co-operation with other States or international organizations, to the further development of the production, industries, and other applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States."¹⁵⁰ (Emphasis added.)

The Mexican representative at the ENDC explained that this duty "can and should be enunciated as a true legal obligation, although the obligation is imperfect and general and its practical significance will continue to depend ultimately on the will of the nuclear Powers". He further explained that the phrase "according to their ability" referred "not only to the parties' financial and technical ability but also to their le-

148 A/C.1/PV. 1580, 6 June 1968, para. 72 (Pakistan).

149 A/CONF.35/C.2/SR.7, 13 Sept. 1968, p. 66 (UAR).

150 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 12 (ENDC/196, 19 Sept. 1967).

gal ability, since much of (the) knowledge is covered by patents owned by private persons."¹⁵¹

The Canadian representative at the ENDC was the first to object to the wording of the proposal. He was worried that the use of the word "duty" might be interpreted as an unrestricted obligation to comply with all requests from non-nuclear-weapon States.¹⁵² The UK representative in support of the views expressed by the Canadian representative also expressed concern that the wording "could lead some countries to expect to receive for nothing what other countries have worked hard to produce."¹⁵³ The United States, while sharing the objectives sought by Mexico, had supported the view that "the Mexican formulation may in some respects create too sweeping and too general an obligation."¹⁵⁴

In the light of these objections a better assessment can be made of the mere obligation to "co-operate in contributing", as it was finally formulated in Article IV after the presentation of the identical treaty drafts of 18 January 1968. As it has been rightly noted, the obligation is even less firm than one simply "to contribute" or "to make available".¹⁵⁵

Several countries belittled the value of the obligation. It was considered as not constituting any binding commitment,¹⁵⁶ or as hardly adequate,¹⁵⁷ thus leaving the non-nuclear-weapon States in a position of inferiority.¹⁵⁸ One of the most severe warnings in this respect was voiced by the representative of

151 ENDC/PV. 331, 19 Sept. 1967, para. 11.

152 ENDC/PV. 336, 5 Oct. 1967, para. 11.

153 ENDC/PV. 337, 10 Oct. 1967, para. 42.

154 ENDC/PV. 338, 12 Oct. 1967, para. 16.

155 Willrich, Non-Proliferation Treaty, p. 131.

156 A/C.1/PV. 1567 (prov.), 14 May 1968, p. 72 (India).

157 A/C.1/PV. 1571 (prov.), 20 May 1968, p. 61 (South Africa).

158 A/CONF.35/C.2/SR.5, 11 Sept. 1968, p. 42 (Ghana).

an advanced non-nuclear-weapon State. The representative of Belgium to the First Committee of the UN General Assembly said that :

"The needs of industrial and scientific development make this co-operation imperative if we want to avoid introducing into the civilian area the distinction accepted in the military area, which would be unacceptable and would inevitably lead to the calling into question of the treaty."¹⁵⁹

But what is meant by co-operation ? Co-operation was understood to mean assistance provided by the advanced to the less advanced countries in the field of nuclear technology.¹⁶⁰ Co-operation, however, was not considered to be limited to mere technical assistance. As one UN delegate put it, co-operation "should be of a multiple character". A policy of extensive credits to encourage and generalise the use of nuclear energy for peaceful purposes was considered to be an urgent task.¹⁶¹

"Assistance", as noted in a paper prepared for the Conference of Non-Nuclear-Weapon States, is a word which may be defined in a number of different ways, even within the context of the NPT.¹⁶² In the latter case, assistance could extend from access to scientific and technological information to building research reactors and nuclear power plants.¹⁶³ The use of the words "to the further development ..." certainly means that co-operation is not limited to the exchange of equipment and in-

159 A/C.1/PV. 1571 (prov.), 20 May 1968, pp. 49-50.

160 For example, see A/CONF.35/C.2/SR.6, 12 Sept. 1968, p. 56 (Pakistan).

161 A/C.1/PV. 1627 (prov.), 2 Dec. 1968, pp. 41-42. (Columbia).

162 See Ryokichi Sagane, loc.cit., p. 1.

163 See Ibid., pp. 1-4 and M.A. El-Guebelly, "Submission of Periodic Reports by Countries, to an International Agency, on the Nature and the Extent of Nuclear Technical Assistance and Fissionable Material Supplied by Them to Non-Nuclear-Weapon States for Peaceful Purposes", Conference of Non-Nuclear-Weapon States, Geneva 1968 (A/CONF.35/Doc. 4, 3 July 1968), pp. 2-4.

formation which is already covered by the first part of paragraph 2 of Article IV.

Assistance could be on a purely commercial basis or otherwise.¹⁶⁴ It "should not be interpreted simply as an act of benevolence in which the rich give to the poor what the former no longer need."¹⁶⁵ Some generosity on the part of the "contributing States" towards the recipients is expected. The "Fanfani Proposal" on the transfer of fissionable materials to the non-nuclear-weapon States at a reduced price is but one example of the expected generosity which would compensate the latter for renouncing nuclear weapons.

The extent and limits of co-operation were hard to foresee. The three nuclear-weapon States Party to the Treaty had referred on several occasions during the Treaty's negotiations and after, to their previous records of co-operation, and promised to intensify this co-operation which would result from the trust and confidence generated by the NPT.¹⁶⁶ However, the US Atomic Energy Commission, for example, had the following to say :

"We do not, however, interpret Article IV as meaning that the US will be compelled to embark on any costly new programs or as obliging the US to meet all requests and demands. Neither do we construe Article IV as overriding the provisions of the US Atomic Energy Act, nor will it remove the discretion we have in determining the nature of our co-operative relationships with other countries, on a case by case basis."¹⁶⁷

Limits on co-operation do in fact exist. They were even realistically acknowledged by Mexico when it presented its

164 Ibid., p. 3.

165 Ryokichi Sagane, loc.cit., p. 4.

166 For example, see ENDC/PV. 297, 18 May 1967, para. 17 (USSR); ENDC/PV. 303, 8 June 1967, paras. 12-14 (United States); ENDC/PV. 307, paras. 16-17, 22 June 1967, and A/C.1/PV. 1575, 28 May 1968, para. 71 (United Kingdom).

167 Hearings on NPT, 1969, p. 498.

proposal of Article IV which included the phrase "according to their ability". It had been suggested that existing restrictions on co-operation should be reviewed so as to permit the enjoyment of the full benefits of co-operation.¹⁶⁸ Dr. Sigvard Eklund, the Director-General of the IAEA, noted that with the growing free exchange of information about research, there was a contrary trend in that commercialization had brought increasing secrecy.¹⁶⁹

The guidelines for nuclear transfer worked out by the London Suppliers' Club are a vivid proof that constraints and limitations imposed on nuclear co-operation do in fact exist. Although the objectives pursued by the "Club" are quite legitimate, i.e., the prevention of the proliferation of nuclear weapons and the elimination of commercial competition as a factor in negotiating safeguards, the guidelines may well lead some supplier States to follow the US example in refraining from the transfer of basic technology and know how, especially in the sensitive areas of uranium enrichment, reprocessing and heavy water production. Moreover, in the process of restricting the transfer of technologies which have potential military nuclear applications, the guidelines may have the impact of restricting as well the flow of basic knowledge in areas not necessarily confined to the nuclear field.

In fact, in examining closely the guidelines and the export trigger list and agreed on common criteria for technology transfers, all of which are attached to this study, it is reasonable to conclude that the problem with the guidelines does not lie in their content as much as it lies in the spirit which inspired their formulation, a spirit very much in favor of denying certain technologies to the developing countries regardless of the principles enshrined in Article IV of the NPT. The mere fact that the guidelines have been worked out in secrecy and without

168 See A/C.1/PV. 1570 (prov.), 17 May 1968, pp. 13-15, (Australia).

169 A/PV. 1979 (prov.), 8 Nov. 1971, p. 13.

the participation of the developing countries and kept secret for a long period of time before being released is also a violation of the essence of co-operation prescribed by Article IV.¹⁷⁰

At the Sixth Conference of Heads of State or Government of Non-Aligned Countries, held at Havana, Cuba, from 3 to 9 September 1979, this issue had not been left untackled. After a series of preparatory meetings, the Conference devoted a considerable part of its "Political Declaration" to the use of nuclear energy for peaceful purposes. In one of the most important segments of this part, the Conference expressed concern at "the monopolistic policies of nuclear supplier countries restricting and limiting the transfer of technology and imposing conditions which are incompatible with the sovereignty and independence of the developing countries". The Conference called for full observance of the principles of indiscrimination and free access of nuclear technology. It reaffirmed the right of each country to develop programmes for the use of nuclear energy for peaceful purposes in conformity with their own freely determined priorities and needs.¹⁷¹

Turning now to the fields of co-operation of direct interest to the non-nuclear-weapon States, a distinction could be made between the advanced States and those less advanced and more particularly the developing countries.

The main preoccupations of the advanced non-nuclear-weapon States, as treated earlier in this chapter, are the supply of nuclear fuel and information on uranium enrichment techniques and reactor construction. We need not repeat here those pre-

170 See Appendix 19. For a critical analysis of the London Suppliers' Club and its guidelines, see Mounir Ahmad Khan, Nuclear Energy and International Cooperation: A Third World Perception of Its Erosion of Confidence (New York: The Rockefeller Foundation and London: The Royal Institute of International Affairs, Sept. 1979) (Sponsored by the International Consultative Group on Nuclear Energy), pp. 13-18.

171 UN Doc. A/34/542, 11 Oct. 1979, Annex, pp. 73-74.

occupations which have led to co-operative ventures among those advanced States not only as far as uranium enrichment techniques are concerned but also in the field of advanced reactor technology.

As for other non-nuclear-weapon States, and more particularly the developing countries, their needs are quite different and more pressing. In 1978, the number of developing countries with firm nuclear power programmes - once expected to grow rapidly during the 1970s - remained stable. As mentioned earlier, only 12 developing countries are scheduled to have power reactors in operation by 1984.

The developing countries in general are more in need of economic and technical assistance, training and capital investments.¹⁷² Later on, they could produce nuclear equipment on a small scale but it would not be possible or even economically practical for them, at least for some time, to venture into uranium enrichment or reactor construction.¹⁷³

Upon the initiative of Brazil and supported by other Latin America countries,¹⁷⁴ the Conference of Non-Nuclear-Weapon States adopted a resolution which requested the UN Secretary-General to appoint a group of experts to prepare a full report on "all possible contributions of nuclear technology to the economic and scientific advancement of the developing coun-

172 For example, see A/CONF.35/SR.6, 8 Sept. 1968, p. 75 (Uganda); A/CONF.35/SR.7, 9 Sept. 1968, p. 87 (Ceylon); A/CONF.35/SR.8, 10 Sept. 1968, p. 104 (UAR); A/CONF.35/C.2/SR.4, 10 Sept. 1968, p. 35 (Philippines); and A/C.1/PV. 1711 (prov.), 3 Dec. 1969, p. 79 (Indonesia).

173 For example, see A/CONF.35/C.2/SR.8, 16 Sept. 1968, pp. 81-82 (Yugoslavia).

174 A/CONF.35/SR.6, 6 Sept. 1968, p. 78 and A/CONF.35/C.2/L.2, 13 Sept. 1968; Rev. 1, 17 Sept. 1968; and Rev. 2, 23 Sept. 1968.

tries".¹⁷⁵ The report was submitted to the 24th session of the UN General Assembly in 1969.¹⁷⁶

The Report is not only useful as far as the developing countries are concerned but is also informative as to the more general aspects of the peaceful uses of nuclear energy. The report was in fact useful in exposing those general aspects under the first part of this chapter.

As far as the developing countries are concerned, the report could be summarized as follows :

On the transfer of nuclear technology, the need for more nuclear centres is stressed, as they can form a valuable link in this transfer. When a strong cadre of research scientists is available, consideration may be given to nuclear research reactors.

On nuclear minerals, it is expected that a more substantial proportion of the uranium reserves to be located in the future will be found in the developing countries. The experts consider that more intensive exploration for uranium is one of the most important ways in which international assistance could be provided to developing countries.

The group of experts recommended that encouragement should be given to manufacturers to take a greater interest in medium-sized nuclear power plants more suitable for the needs of a growing number of developing countries.

For the remote future, agro-industrial complexes are considered to be promising.

On radio-isotopes and ionizing radiation, we need not repeat here their valuable effects which are and could be of great benefit to the developing countries.

175 Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution G, p. 12.

176 Contributions of Nuclear Technology (A/7568).

As to the international co-operation for promoting peaceful nuclear technology to the benefit of the developing countries, the report included the following remarks and recommendations :

It took note of the system for the international exchange of information which was being developed by the International Nuclear Information System of the IAEA (INIS).

The group of experts believed that the technical co-operation projects carried out by the IAEA would remain the chief source of assistance in introducing nuclear science and technology into many of the developing countries. It expressed concern at the difficult financial position of the IAEA and felt that there should be a steady increase in the resources available for multilateral technical assistance.

The governments of developing countries were requested to re-examine their positions as far as UNDP projects are concerned, taking into consideration the success of projects already executed in other countries.

It was hoped that international sources of finance, especially the IBRD, would "review the positions taken on the prospects, criteria and conditions for financing major nuclear installations, bearing in mind not only the immediate benefits from initial projects but also the long-term contributions that such projects could make to developing countries".¹⁷⁷

It was only this last specific recommendation of the report which was textually mentioned in the UN General Assembly resolution which, inter alia, commended the report.¹⁷⁸ In essence, this particular recommendation as well as others emanating from the group of experts were in line with the recommendations adopted by the Conference of Non-Nuclear-Weapon States in its

¹⁷⁷ Ibid., para. 262.

¹⁷⁸ GA Res. 2605 A(XXIV), 16 Dec. 1969, operative paragraphs 2 and 3. GAOR, 24th Sess., Suppl. No. 30 (A/7630), pp. 18-20.

resolution "J" which was also initiated by a group of Latin American countries.¹⁷⁹ Resolution "J" not only contained recommendations concerning the UNDP and the IBRD but also requested the IAEA General Conference to consider the establishment of a "Fund of Special Fissionable Materials" which we have referred to earlier in this chapter.¹⁸⁰ But as the IAEA was also requested by other resolutions of the Conference to undertake certain tasks as an international channel of co-operation, we come now to the last part of this chapter allotted to the channels of co-operation.

At the 1975 NPT Review Conference, the IAEA was also the focal point of the Conference's recommendations in its review of the implementation of Article IV, as has already been demonstrated and as will further be shown below.

IV. Channels of Co-operation

Article IV of the identical treaty drafts of 24 August 1967 spoke of the right of the parties "to contribute alone or in co-operation with other States" to the further development of the application of nuclear energy for peaceful purposes. In accordance with the Mexican proposal of 19 September 1967, the identical treaty drafts of 18 January 1968 also included the co-operation with international organisations.¹⁸¹

179 Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution J, pp. 16-17. For the basic draft, see A/CONF.35/C.2/L.6, 17 Sept. 1968; Add. 1, 18 Sept. 1968; and Add. 2, 20 Sept. 1968.

180 The resolution was objected to by five Soviet bloc States. Seventeen other States abstained including Canada, Japan, the Scandinavian countries and most Western European States. It seems that the advanced non-nuclear-weapon States realized that in the long run, costs incurred by such a resolution would not be limited to the nuclear-weapon States. See Scheinman, "Nuclear Safeguards, the Peaceful Atom, and the IAEA", p. 55.

181 DCOR, Suppl. for 1967 and 1968, Docs. 230 and Add. 1, Ann. IV, Sec. 12 (ENDC/196, 19 Sept. 1967). The Mexican proposal gained preference in comparison with a Nigerian proposal which stipulated that "each Party to the Treaty undertakes

Channels of co-operation did not receive enough attention during the NPT negotiations. At the Conference of Non-Nuclear-Weapon States they were, however, at the centre of the debates and the subject matter of many resolutions adopted by the Conference on the peaceful applications of nuclear energy.

Without belittling the value of bilateral and regional multilateral co-operation, the trend at the Conference of Non-Nuclear-Weapon States was very much in the direction of co-operation through international organizations and more particularly through the IAEA in Vienna, a trend which was later confirmed by the members of the IAEA itself as well as by the 1975 NPT Review Conference. In a first section we will tackle bilateral co-operation followed by a second section on multilateral regional co-operation and a third one on co-operation through international organizations.

1. Bilateral Co-operation

At the Conference of Non-Nuclear-Weapon States, bilateral co-operation received little attention but its equal importance with co-operation through international organisations was stressed.¹⁸² However, the increasing role of international organisations vis-à-vis that of bilateral arrangements was favoured.

The Conference was also an occasion for some advanced non-nuclear-weapon States to refer to the assistance they have given to other countries in the field of the peaceful atom.¹⁸³ As to the nuclear-weapon States, four of which attended the Conference as observers and did not participate at all in its

to co-operate directly or through the International Atomic Agency ..." *Ibid.*, Sec. 18 (ENDC/202, 2 Nov. 1967), Article IV-A. The use of the phrase "international organisations" is more pertinent than the sole mentioning of the IAEA whatever its leading position is.

182 A/CONF.35/C.2/SR.6, 12 Sept. 1968, p. 57 (Pakistan) and A/CONF.35/C.2/SR.13, 23 Sept. 1968, pp. 141-142 (Canada).

183 A/CONF.35/C.2/SR.6, 12 Sept. 1968, p. 55 (FRG); A/CONF.35/C.2/SR.7, 13 Sept. 1968, p. 69; and A/CONF.35/C.2/SR.13, 23 Sept. 1968, pp. 141-142 (Canada).

deliberations,¹⁸⁴ they had other occasions to demonstrate their bilateral co-operation with other States.¹⁸⁵

Bilateral nuclear co-operation has made new strides, especially between the United States and the Soviet Union, as evidenced by the agreement signed in June 1973 by President Richard Nixon and Party Secretary Leonid Brezhnev, as well as among the advanced countries of Europe and Japan.¹⁸⁶ The latter country, for example, signed in 1972 an agreement with Australia and another with France for co-operation in the peaceful uses of nuclear energy.¹⁸⁷ Specific agreements on uranium enrichment, as previously noted, have been negotiated and signed between Western European countries and the Soviet Union.

As far as the developing countries are concerned, the United States, for example, has arranged for the supply of Mexico's first power reactor, which is expected to operate by 1982, as well as the provision of enrichment services. The same applies to an agreement with Mexico relating to a second power reactor to be operational by 1983 and to the supply of a power reactor to Yugoslavia. These bilateral co-operation agreements have been communicated by the United States to the IAEA after the 1975 NPT Review Conference as an indication of American preferential policies in favor of the Parties to the NPT for the promotion of their peaceful nuclear activities.

184 The People's Republic of China though invited to attend the Conference had disregarded the invitation.

185 For example, see ENDC/PV. 366, 16 Feb. 1968, paras. 20-21 (USSR) and Hearings on NPT, 1969, p. 487 (US agreements for co-operation in the civil uses of atomic energy in effect in 1969).

186 For the 1973 US/Soviet "Agreement on Scientific Cooperation in Peaceful Uses of Atomic Energy", see DOSB, Vol. LXIX, No. 1778, 23 July 1973, pp. 159-160. For a brief discussion of the objectives of the agreement and its significance in comparison with the previous accords in this field, see John W. Finney, "US, Russia Emphasize New Types of A-Power", International Herald Tribune, 25 June 1973.

187 Le Monde, 19 Feb. 1972 and 27-28 Feb. 1972. See also A/PV. 2076 (prov.), 31 Oct. 1972, p. 46 (Australia).

Bilaterals had been, and remain, the main channel for providing fissionable materials. They were preferred as a channel as opposed to the IAEA because supply arrangements normally covered longer periods and the materials furnished could be in advance of immediate needs. The IAEA had difficulty in acting as an intermediary in toll enrichment and to arrange for third country fuel service.¹⁸⁸ The bilaterals had also been the only channel through which the developing countries had financed the construction of nuclear power stations.

At the Conference of Non-Nuclear-Weapon States Kenya suggested that the nuclear Powers submit annual reports on the nature and extent of their nuclear technical assistance to an international agency.¹⁸⁹ Ghana had also suggested to lay before an international body the agreements concluded on bilateral co-operation.¹⁹⁰ This, however, was not the first occasion when the reporting issue was raised.

To minimize the ground for suspicion by Parties to the Treaty with respect to inter-State nuclear activities, the Nigerian delegation to the ENDC proposed an article to be included in the NPT which read as follows :

"Each Party to the Treaty undertakes to communicate annually to the International Atomic Energy Agency, full information on the nature, extent and results of its co-operation with any other Party or group of Parties, in the development of nuclear energy for peaceful purposes. The reports so received by the International Atomic Energy Agency shall be circulated by the Agency to all the Parties to the Treaty."¹⁹¹

188 See UN Doc. A/7677/Add. 2, 7 Nov. 1969, pp. 9-10, para. 18.

189 A/CONF.35/SR.8, 10 Sept. 1968, p. 98.

190 A/CONF.35/C.2/SR.5, 11 Sept. 1968, p. 42. Ghana hoped that some standardisation of international agreements for the exchange of technical information and co-operation might be achieved.

191 DCOR, Suppl. for 1967 and 1968, Docs. 230 and Add. 1, Ann. IV, Sec. 18 (ENDC/202, 2 Nov. 1967), Article IV-B and ENDC/PV. 371, 28 Feb. 1968, paras. 13-14.

Later on, the same proposal was submitted as an additional paragraph to Article V of the identical treaty drafts of 18 January 1968, so as to cover the provisions of both Articles IV and V.¹⁹²

Canada was the first to object to the Nigerian proposal on the ground that it might be an onerous addition to the functions of the IAEA.¹⁹³ This led the Nigerian delegate at the ENDC to refute such an argument as contrary to the Statute of the IAEA and the documents which the Agency had issued about its statutory functions and activities.¹⁹⁴

The United States also rejected the proposal on the grounds that "(m)aking the reports compulsory for each party could prove unnecessarily burdensome to many, as well as to IAEA, especially in view of the expected acceleration and expansion of such co-operation and exchanges."¹⁹⁵ The provisions of Article IV were found to encourage and facilitate the circulation of such information reports through the IAEA and other international organisations and at periodic international conferences on the peaceful uses of atomic energy.¹⁹⁶

The Nigerian proposal was dropped in its revised working paper of 14 March 1968.¹⁹⁷ Its acceptance by the original co-authors of the NPT would certainly have been of great value in reflecting the status of bilateral and multilateral co-operation in the field of nuclear energy. However, the Nigerian worries were met by the safeguards provisions of Article III with

192 DCOR, Suppl. for 1967 and 1968, Docs. 230 and Add. 1, Ann. IV, Sec. 36 (ENDC/220, 28 Feb. 1968) and ENDC/PV. 371, 28 Feb. 1968, para. 13.

193 ENDC/PV. 346, 9 Nov. 1967, para. 8.

194 ENDC/PV. 351, 28 Nov. 1967, paras. 8-13.

195 ENDC/PV. 378, 13 Mar. 1968, para. 7.

196 Ibid.

197 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 37 (ENDC/220/Rev. 1, 14 Mar. 1968).

respect to the furniture of source or special fissionable material or equipment or material especially designed or prepared for the processing, use or production of special fissionable material to non-nuclear-weapon States.

Some resolutions of the Conference of Non-Nuclear-Weapon States could be considered as indirectly entailing bilateral co-operation, such as Resolution M on the access for students and scientists to the scientific institutions and nuclear establishments of the nuclear-weapon States and the non-nuclear-weapon States "which are in a position" to do likewise.¹⁹⁸ The exchange of students and scientists usually takes place in accordance with bilateral cultural agreements.

In its "Final Declaration", the 1975 NPT Review Conference has also encouraged increased assistance to the developing countries bilaterally as well as through multilateral channels. Moreover, the NPT Review Conference recommended that States Party to the NPT in a position to do so, meet, to the fullest extent possible, technically sound requests for technical assistance made by developing States Party to the Treaty which the IAEA is unable to finance from its own resources. Accordingly, in 1975 for example, lack of funds for various projects for technical assistance were met by special contributions from the United States for Malaysia, Mexico, Philippines and Thailand.

2. Multilateral Regional Co-operation

It is expected that multilateral regional co-operation will increase as a result of the NPT. Article IV is drafted in a way as to encourage such co-operation. We have previously demonstrated that the use of the words "territories" and "areas" in the second part of paragraph 2 is an indication of preference for regional co-operation.

In Europe, for example, there are three organizations specifically engaged in nuclear energy co-operation, namely the European Atomic Energy Community (Euratom), the OECD Nuclear

¹⁹⁸ Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution M, p. 19.

Energy Agency (NEA) and the European Organization for Nuclear Research better known as CERN (which stands for "Conseil européen pour la recherche nucléaire", the interim body which was established to lay the grounds for establishing the Organisation).¹⁹⁹

Moreover, in the aftermath of the October 1973 Middle East war and the oil embargo, the International Energy Agency (IEA) was established in November 1974 as an autonomous body within the framework of the OECD with an overall responsibility to implement an International Energy Programme with a major objective of reducing excessive dependence on oil and the development of alternative energy sources including nuclear energy.²⁰⁰

Apart from Europe, and more specifically in Latin America, the "Agency for the Prohibition of Nuclear Weapons in Latin America" (OPANAL), established by virtue of Article 7 of the Treaty of Tlatelolco, could serve as a useful framework for increased co-operation in the peaceful atom among the Latin American countries Party to the Treaty, and supplement the work of the Inter-American Nuclear Energy Commission of the Organization of American States (OAS).

In the present chapter we neither intend to dwell on the functions and practices of those existing organisations, which is beyond the scope of this study, nor shall we deal with their functions as inspectorates which will later be discussed in conjunction with the application of Article III of the NPT. What is of importance here is to distinguish the different ro-

199 International co-operation in the field of nuclear energy in the Socialist Countries of Eastern Europe takes place in the framework of the Council for Mutual Economic Assistance (COMECON). See A/PV. 1979 (prov.), 8 Nov. 1971, p. 67 (USSR).

200 See Energy Policies and Programmes of IEA Countries, 1978 Review (Paris: OECD, 1979), especially p. 2, Part I and pp. 25-26.

les of those organisations and to see to what extent they complement each other.²⁰¹

(a) Euratom

It came into existence on 1 January 1958.²⁰² Along with the European Coal and Steel Community and the European Common Market it encourages European integration as a political objective and aims specifically at creating the "conditions necessary for the speedy establishment and growth of nuclear industries" in the members of the Community.²⁰³

The fissionable materials and equipment needed for Euratom's peaceful programmes are supplied mainly by the United States by virtue of agreements concluded through the Supply Agency of the Community.

Euratom not only co-ordinates national nuclear research programmes but also has its own research programme. Its Joint Nuclear Research Centre consists of four research centres located at Ispra (Italy), Petten (the Netherlands), Geel (Belgium) and Karlsruhe (FRG). The Ispra centre is the base of its major research project, the ORGEL second-generation nuclear

201 For a succinct exposition on the three European organisations, see the paper which was prepared for the Hearings held by the US Senate Committee on Foreign Relations on the NPT : Ellen C. Collier, "Effects of the Non-Proliferation Treaty on International Institutions", Hearings on NPT, 1969, pp. 466-471. See also Achille Albonetti, "Europe and Nuclear Energy", Atlantic Institute for International Affairs (Paris), The Atlantic Papers, No. 2, 1972.

202 For substantial studies on EURATOM, see Jaroslav G. Polach, EURATOM (Dobbs Ferry, N.Y. : Oceana Publications, 1964); Hugo J. Hahn, "Euratom : The Conception of an International Personality". Harvard Law Review, Vol. 71, No. 6, Apr. 1958, pp. 1001-1056; H.L. Nieburg, "Euratom : a Study in Coalition Politics", World Politics, Vol. XV, No. 4, June 1963, pp. 597-622; and Lawrence Scheinman, "Euratom : Nuclear Integration in Europe", International Conciliation, No. 563, May 1967.

203 Article I of the Treaty establishing Euratom. For the text of the Treaty with Annexes and Protocols, see UNTS, Vol. 298, No. 4301, pp. 167-266.

reactor.²⁰⁴ Some research is also conducted by virtue of contracts signed with member States, enterprises or international organisations.

Euratom's importance diminished soon after its establishment. In the first place, the discovery of large deposits of cheap coal in 1959 calmed the urge for nuclear power in the aftermath of the Suez crisis of 1956, which had resulted in a shortage of oil in Europe. Euratom was also weakened by national disparities in nuclear energy and the nuclear nationalism of its members States, especially France which was determined to build an independent nuclear deterrent.²⁰⁵

However, several factors are making for a rejuvenated, enlarged Euratom. The continuous increase in oil prices in recent years and the need to diversify Europe's sources of energy has intensified co-operative efforts in nuclear power by Euratom members in an era marked by the "energy crisis" and mounting pressure for environment protection.²⁰⁶ Moreover, the NPT, in fact, brought the original five non-nuclear-weapon members closer together as a result of the future application of Article III in the Community. Fears of economic discrimination and industrial espionage led them to raise the importance of Euratom for their nuclear future as well as the effectiveness of its inspection system. France has also become more willing to share its uranium enrichment techniques with the other States, as evidenced by the Eurodif project.

204 Scheinman, "Euratom : Nuclear Integration in Europe", p. 13.

205 For a detailed analysis, see Ibid., pp. 31-51.

206 This does not mean to say that peaceful nuclear energy is without hazardous risks for the environment. The 3-mile accident is but one example. It seems, however, that those risks are controllable to a great extent and that serious efforts are being deployed to minimize those risks.

On 6 February 1973, the Community's science and technology Ministers agreed on a four-year research programme entailing a budget of 140 million dollars. The programme indicated for the first time a move away from purely nuclear research. It included such areas as environment protection and applied data processing. The programme was certainly a boost to Euratom which continued to survive in the past on annual budgets and sometimes on even monthly appropriations. By 1978, Euratom has already been engaged in several projects pertaining not only to nuclear fission energy but also to thermonuclear fusion.²⁰⁷

(b) The Nuclear Energy Agency (NEA)

It is a specialized agency of the Organisation for Economic Co-operation and Development (OECD) which was formerly the Organisation for European Economic Co-operation (OEEC) created by the West European countries to co-ordinate Marshall Plan aid with domestic European efforts.

NEA was established on 20 April 1972, replacing OECD's European Nuclear Energy Agency (ENEA), upon the adhesion of Japan as a full member.²⁰⁸ In view of the fact that Japan has become the first non-European member, the word "European" in the title and in Article 1 (a) of the Statute was deleted.²⁰⁹ Canada and the United States, which as members of the OECD were associated members of NEA, followed Japan in 1975 and 1976 respectively. The Commission of the European Communities also takes part in the work of the Agency.

The objectives of NEA remain substantially those of ENEA. It provides a framework for co-operation in nuclear development

207 See International Herald Tribune, 7 Feb. 1973, Le Monde, 7 Feb. 1973 and The Times, 7 Feb. 1973 as well as the Twelfth General Report on the Activities of the European Communities, 1978 (Brussels and Luxembourg: ECSC/EEC/EAEC, Feb. 1979), pp. 215-218.

208 ENEA was established on 20 December 1957. Its membership comprised the eighteen European members of the OECD.

209 See Nuclear Law Bulletin, No. 10, Nov. 1972, p. 25.

among the member States with less far-reaching political objectives than in the case of Euratom.²¹⁰

The Agency has organized several joint projects, each of which is an independent entity with its own conventions, membership, and administrative structure.²¹¹ The most outstanding of these projects in operation is the Eurochemic plant for re-processing irradiated fuels at Mol, Belgium, which was transferred to Belgium in 1978, as mentioned earlier.

During the NPT negotiations, and in contrast with Euratom, there was little concern by ENEA that the Treaty would affect it in any way.

(c) CERN

It was established on 29 September 1954, after the entry into force of a Convention drawn up the previous year by a UNESCO-sponsored conference. The founding States were Belgium, Denmark, France, the FRG, Greece, Italy, the Netherlands, Norway, Sweden, Switzerland, the UK and Yugoslavia. Subsequently, Austria and Spain joined the Organisation. Both Yugoslavia and Spain withdrew later for financial reasons but the former joined once more as an observer State following the example of Turkey. CERN's Headquarters are in Geneva.

CERN's idea emanated from a realisation by nuclear physicists in Europe that further advances in pure research on a par with those taking place in the United States could only come through the construction of particle accelerators of a size and cost beyond the means of individual nations.

Article II of the Convention stipulates that the Organisation "shall provide for collaboration among European States in nuclear research of a pure scientific and fundamental character, and in research essentially related thereto. The Organisation shall have no concern with work for military require-

²¹⁰ For NEA's principle activities, see Ibid.

²¹¹ Collier, loc.cit., p. 469.

ments and the results of its experimental and theoretical work shall be published ..."²¹²

The main features of CERN are that it is a non-political organisation, its activities are of no direct concern to any powerful industrial or commercial interest and that the national activities of the State members are not duplicating or competing with its work.²¹³

As it was rightly noted by one observer, the effects of the NPT on CERN have received very little public comment. "Since the organization is interested in fundamental and pure scientific research and its convention undertakes to have no concern with work for military requirements, both the (NPT) and CERN are working in the same direction of encouraging the peaceful uses of the atom."²¹⁴

(d) The Agency for the Prohibition of Nuclear Weapons in Latin America (OPANAL)

The Agency has its headquarters in Mexico City. In contrast with the previous organisations, it has been essentially established as an arms control organisation in order to ensure compliance with the obligations of the Tlatelolco Treaty. However, nothing in the Treaty prevents the Agency from promoting the peaceful uses of nuclear energy among the Contracting Parties. Articles 17 and 18 of the Treaty acknowledge the rights of the Parties to use nuclear energy for peaceful purposes and to benefit from peaceful nuclear explosions.²¹⁵ The 1972 agree-

212 For a short history and evolution of CERN, see CERN, Annual Report, 1979 (Geneva, 1979). pp. 5-6.

213 See J. Gueron, "The Lessons to be Learned from EURATOM", Bulletin of the Atomic Scientists, Vol. XXIII, No. 3, Mar. 1967, p. 38.

214 Collier, loc.cit., p. 471.

215 See Appendix 8. The activities of OPANAL will be later reviewed in Chapter 13 of this study.

ment for co-operation between the IAEA and the OPANAL is indicative of the latter's role in this field.²¹⁶

Co-operation among States also takes place in the form of councils or co-ordinating committees such as the Joint Arab Scientific Council for the Utilisation of Atomic Energy for Peaceful Purposes, established in 1964²¹⁷ and the Nordic Co-ordination Committee for Atomic Energy established in 1968.²¹⁸

It is quite significant that as far as the peaceful uses of nuclear energy are concerned, none of the resolutions of the Conference of Non-Nuclear-Weapon States was related to the work of any of the regional nuclear organisations or groupings. Most of these resolutions were mainly addressed to international organisations and more particularly to the IAEA.

The IAEA was also at the centre of the review of Article IV of the NPT at the 1975 NPT Review Conference. It would also be quite pertinent before concluding this section to recall once more the interest that the NPT Review Conference has shown to the idea of establishing regional or multinational nuclear fuel cycle centres.

3. International Co-operation Through International Organisations

At the Conference of Non-Nuclear-Weapon States, the prefer-

216 See Articles I, paragraph 2 and IV, paragraph 1 in IAEA Doc. INFCIRC/25/Add. 4, 15 Dec. 1972.

217 See M.H. Ghanem, "Les Organisations Spécialisées dans le cadre de la Ligue des Etats Arabes" (en arabe), Revue Egyptienne du Droit International, Vol. 27, 1971, pp. 52-53. See Also the text of the 1971 IAEA agreement for co-operation with the Arab League in IAEA Doc. INFCIRC/25/Add. 3, 14 Jan. 1972.

218 F.R. Marcus, "An Approach to Regional Co-operation in Nuclear Energy : The Nordic Collaboration" (A/CONF.49/P/007 : Finland), in Peaceful Uses of Atomic Energy, Vol. I, pp. 627-639. For a succinct survey of other forms of co-operation, see Georges Delcoigne and Georges Rubinstein, Non-prolifération des armes nucléaires et systèmes de contrôle (Bruxelles : Institut de Sociologie de l'Université Libre de Bruxelles, 1970), pp. 46-47.

ence for international co-operation through an international organisation was sometimes either a general one without specifying a particular organisation²¹⁹ or an undecided one between existing organisations and the establishment of a new machinery.²²⁰ However, while most of the participating States in the Conference opted for the IAEA,²²¹ they did not fail to stress the need for strengthening its role and reorganising it in order to meet the expected intensification of international co-operation in the peaceful uses of nuclear energy as a result of the NPT.²²²

The issue of strengthening and reorganising the IAEA was partly triggered by suggestions for establishing new machineries in the field of the peaceful uses of nuclear energy. Belgium entertained the idea of creating a new organisation for all peak technologies, the IAEA being integrated as part of it.²²³ Ghana, while hesitating between a reformed IAEA and a new body, was of the view that if a new body were established, the IAEA would become its technical arm. Moreover, "IAEA would carry on with its existing programmes of technical assistance ... while the new body would take general charge of technical assistance activities and be responsible for planning such assistance at the regional and international levels."²²⁴

219 For example, see A/CONF.35/SR.7, 9 Sept. 1968, p. 87 (Ceylon) and A/CONF.35/SR.9, 10 Sept. 1968, p. 123 (Somalia).

220 For example, see A/CONF.35/C.2/SR.4, 10 Sept. 1968, p. 29 (Pakistan) and A/CONF.35/SR.11, 11 Sept. 1968, p. 151 (Afghanistan).

221 For example, see A/CONF.35/SR.6, 6 Sept. 1968, p. 75 (Uganda) and p. 78 (Brazil), and A/CONF.35/SR.11, 11 Sept. p. 154 (Chile).

222 For example, see A/CONF.35/C.2/SR.4, 10 Sept. 1968, p. 35 (Venezuela); A/CONF.35/C.2/SR.6, 12 Sept. 1968, p. 53 (Sweden); A/CONF.35/C.2/SR.7, 13 Sept. 1968, p. 71 (Indonesia); and A/CONF.35/SR.15, 13 Sept. 1968, p. 199 (Syria).

223 A/CONF.35/C.2/SR.3, 9 Sept. 1968, p. 19.

224 A/CONF.35/C.2/SR.5, 11 Sept. 1968, pp. 39-41.

However, the only substantial and formal suggestion in this respect emanated from Italy. It proposed the convening of the Conference at regular intervals every year as well as the establishment of a Special Committee on the peaceful uses of nuclear energy. The functions of the Committee "would be to co-ordinate the work of all interested bodies and agencies ... and to promote necessary action for the implementation of the conclusions of the Conference."²²⁵

The Italian proposal met with a cool reception at the Conference. The Conference had merely adopted a resolution inviting the UN General Assembly to consider the best ways and means for the implementation of its decisions, and the continuity of the work undertaken and, at a subsequent session of the General Assembly, to consider the convening of a second Conference of Non-Nuclear-Weapon States. Fear of duplication with the work of the IAEA was expressed. The latter was considered capable of handling the questions raised in the Conference pertaining to the peaceful uses of nuclear energy.²²⁶ Italy was not discouraged by that cool reception. On the contrary, at the twenty-third session of the General Assembly, it raised with greater vigour the establishment this time of a United Nations committee on the peaceful uses of nuclear energy.²²⁷ Opposition to that idea was very strong not only from non-nuclear-weapon Sta-

225 A/CONF.35/C.2/SR.13, 23 Sept. 1968, p. 138 and A/CONF.35/C.2/L.11, 19 Sept. 1968. See also A/CONF.35/C.2/SR.3, 9 Sept. 1968, pp. 16-17 where Italy had first suggested the idea of a permanent United Nations Committee.

226 A/CONF.35/C.2/SR.3, 9 Sept. 1968, pp. 21-22 (Argentina) and p. 22 (Austria); A/CONF.35/C.2/SR.4, 10 Sept. 1968, p. 34 (Australia); A/CONF.35/C.2/SR.6, 12 Sept. 1968, p. 53 (Sweden) and p. 56 (Turkey); A/CONF.35/C.2/SR.7, 13 Sept. 1968, p. 71 (Indonesia); and A/CONF.35/C.2/SR.8, 16 Sept. 1968, p. 91 (Tanzania). For the text of the resolution referred to above, see Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution N, pp. 19-20.

227 A/C.1/PV. 1609 (prov.), 18 Nov. 1968, pp. 68-74.

tes²²⁸ but also from nuclear-weapon States which were not full members of the Conference of Non-Nuclear-Weapon States.

The United Kingdom, the United States and the Soviet Union opposed the establishment of a committee on the same grounds as those invoked by the non-nuclear-weapon States.²²⁹ The Soviet delegate to the First Committee of the General Assembly had also strongly opposed the creation of a special body as well as the convening of periodic conferences of non-nuclear-weapon States on political grounds.²³⁰

This was another occasion for the Soviet Union to express its discontent with the Conference of Non-Nuclear-Weapon States explaining that "(t)he Soviet Union opposes the division of the world into nuclear and non-nuclear States",²³¹ as if the NPT had not in fact formally and juridically divided the world into two parts.

In essence, nuclear-weapon States feared that in a new body the non-nuclear-weapon States would mobilize opinion against them and more particularly against the NPT itself.²³²

Italy, confronted with strong opposition to its proposal

228 For example, see A/C.1/PV. 1614 (prov.), 21 Nov. 1968, p. 7 (Norway) and p. 33 (Ireland); A/C.1/PV. 1616 (prov.), 22 Nov. 1968, pp. 48-50 (Australia); A/C.1/PV. 1627 (prov.), 2 Déc. 1968, pp. 23-25 (Czechoslovakia); and A/C.1/PV. 1628 (prov.), 3 Dec. 1968, p. 37 (Indonesia). Among the few States which supported the Italian idea or favoured a similar one were Spain, Chile, Japan and Sudan. A/C.1/PV. 1614, 1615, 1616 and 1623 respectively.

229 A/C.1/PV. 1609 (prov.), 18 Nov. 1968, p. 37 (United Kingdom); A/C.1/PV. 1611 (prov.), 19 Nov. 1968, p. 28 (United States); and A/C.1/PV. 1624 (prov.), 28 Nov. 1968, pp. 21-26 (USSR).

230 Ibid., pp. 21-25.

231 A/C.1/PV. 1634 (prov.), 9 Dec. 1968, p. 6. See also V. Shestov, "Conference of Non-Nuclear Countries", International Affairs (Moscow), No. 11, Nov. 1968, p. 30.

232 See Scheinman, "Nuclear Safeguards, the Peaceful Atom, and the IAEA", p. 59.

from all quarters, co-sponsored a draft resolution with Argentina, Brazil, Chile, Pakistan and Yugoslavia which, inter alia, intended to convoke the Disarmament Commission at an early date to consider among other questions "... further international co-operation in the peaceful uses of nuclear energy among all States ..." ²³³ To Italy, this was the second best alternative. ²³⁴ The new proposal was also criticised on practical as well as fundamental grounds. Such functions were considered as being completely outside the purview of the Disarmament Commission. ²³⁵

The six-power draft resolution was discarded in favour of another draft sponsored by 14 countries, ²³⁶ which requested the UN Secretary-General to transmit the resolutions of the Conference to the various international bodies concerned, to ask those bodies to report to the Secretary-General on the action taken by them, and who would prepare a comprehensive report on the basis of the information received. ²³⁷

The fourteen-power resolution was objected to only by the Soviet Union, other Socialist States of Eastern Europe and Mongolia. ²³⁸ The Soviet Union objected for various reasons but all emanated from its displeasure with the Conference of Non-Nuclear-Weapon States altogether, and its fear that it might detract from the NPT. ²³⁹

233 GAOR, 23rd Session, Anns., a.i. 96, Doc. A/7445, 19 Dec. 1968, para. 7(C) (A/C.1/L.451).

234 See A/C.1/PV. 1630 (prov.), 5 Dec. 1968, pp. 53-60.

235 A/C.1/PV. 1634 (prov.), 9 Dec. 1968, p. 11 (USSR). See also A/C.1/PV. 1633 (prov.), 9 Dec. 1968, pp. 6-12 (Canada).

236 GAOR, 23rd Sess., Anns., a.i. 96, Doc. A/7445, 19 Dec. 1968, para. 7(E) (A/C.1/L.458 and Add. 1).

237 GA Res. 2456 (XXIII), 20 Dec. 1968. GAOR, 23rd Sess., Suppl. No. 18 (A/7218), p. 13.

238 For the results of the voting, see GAOR, 23rd Sess., Anns., a.i. 96, Doc. A/7445, 19 Dec. 1968, para. 11(B).

239 A/C.1/PV. 1643 (prov.), 17 Dec. 1968, pp. 13-17.

It is quite significant that the question of establishing a new organ was raised originally and specifically to deal with the peaceful uses of nuclear energy and not with all other questions raised in the Conference of Non-Nuclear-Weapon States. The Italian proposal on the Disarmament Commission was also mainly motivated by the peaceful uses of the atom. However, the UAR, just before the convening of the Conference, had pointed out that it was advisable that the ENDC continued to keep a watchful eye on the evolution and universal implementation of the NPT, an idea which was not developed further to constitute a definite proposal.²⁴⁰

The issue of establishing a new body for international co-operation in the peaceful uses of nuclear energy was not seriously pursued, except for some sporadic remarks during the twenty-fourth session of the UN General Assembly in 1969.²⁴¹ The Assembly was then focusing its attention on the reports received from the UN Secretary-General and other organisations in compliance with the 1968 General Assembly resolution.

It is to be noted that apart from the IAEA, the UNDP and the IBRD, which submitted reports on implementation, only the Food and Agriculture Organisation (FAO), among all the specialized agencies which were invited as well to report on the action taken by them in connexion with the recommendations contained in the respective resolutions of the Conference of Non-Nuclear-Weapon States, had substantially reported back to the UN Secretary-General. The report was even prepared by the joint FAO/IAEA Division of Atomic Energy in Food and Agriculture and was closely related to the aforementioned report of the group of experts on the "Contributions of Nuclear Technology to the Economic and Scientific Advancement of the Developing Countries"

240 ENDC/PV. 390, 15 Aug. 1968, paras. 28-30.

241 For examples, see A/C.1/PV. 1692 (prov.), 18 Nov. 1969, p. 41 (Brazil) and A/C.1/PV. 1694 (prov.), 19 Nov. 1969, p. 62 (Yugoslavia).

which deals in certain parts of it with the uses of nuclear techniques in food and agriculture.²⁴²

The other specialized agencies which cared to report felt that no action or comment was called for on their part. Some of them, however, submitted information on their activities to the above-mentioned group of experts.²⁴³

In the following sections, we shall first deal briefly with the IAEA which not only remains the leading organisation in the field of peaceful uses of nuclear energy but which also emerges as the focal point in this field as far as the implementation of the NPT is concerned. Secondly, we shall deal with the UNDP which is the main source of multilateral assistance for projects of the pilot plant and pre-investment type. Lastly, the role of the IBRD will be assessed as an organisation well suited for supporting major nuclear projects.

(a) The International Atomic Energy Agency (IAEA)

What is of direct relevance here is the expanding role of the Agency in promoting the peaceful uses of nuclear energy in the light of the NPT and more particularly as a consequence of the results of both the Conference of Non-Nuclear-Weapon States and the 1975 Review Conference of the Parties to the NPT.²⁴⁴

The role of the IAEA was further reaffirmed in 1978 in the "Final Document" of the Tenth Special Session of the UN General Assembly devoted to disarmament. The Expanding role of the Agency is most apparent in the fields of finance for nuclear energy activities, the procurement of special fissionable materials and equipment and the dissemination of nuclear information. The NPT and the Conference of Non-Nuclear Weapon States had

²⁴² UN Doc. A/7677, 24 Sept. 1969, para. 10.

²⁴³ Ibid., para. 11.

²⁴⁴ For a major work on the IAEA, see Paul C. Szasz, op.cit. See also Arnold Kramish, The Peaceful Atom in Foreign Policy (New York : Harper and Row, 1963) and Lawrence Scheinman, "IAEA : Atomic Condominium ?" in Robert W. Cox and Harold K. Jacobson and Others, The Anatomy of Influence, Decision Making in International Organizations (New Haven : Yale University Press, 1972), pp. 216-262.

Statute with regard to the composition of the principal organ of the Agency, i.e., the Board of Governors.²⁴⁵

(i) Finance for Nuclear Energy Activities : As far as IAEA was concerned, two resolutions of the Conference of Non-Nuclear-Weapon States dealt with this question. The first resolution recommended that the IAEA study further the ways and means of increasing funds available for technical assistance.²⁴⁶ At that time and since 1962, the target for voluntary contributions to the Agency's regular programme of technical assistance was yearly established at 2 million dollars. The target was never met and the percentage of assistance requested which could be approved by the IAEA Board of Governors steadily declined. By 1972, the target reached the figure of 3 million dollars.²⁴⁷ However, the real value of the assistance which was to be provided in 1972 was expected to be about the same as that of ten years ago, because of the effects of inflation and currency adjustments.²⁴⁸ Pledges for 1973 reached over 90 per cent of the 3 million-dollar target.²⁴⁹

The 1978 NPT Review Conference recommended that any special measures of co-operation to meet the growing need of developing States Party to the Treaty might include increased and supplemental voluntary aid provided bilaterally or through multilateral channels such as the IAEA's facilities for administering funds-in-trust and gifts-in-kind.

245 See note 126 above.

246 Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution H(II), p. 14. The draft of that resolution was submitted by Austria, Denmark, Finland, Japan, Norway, Sweden and Switzerland (A/CONF.35/C.2/L.4/Rev. 2, 24 Sept. 1968).

247 IAEA Doc. GC(XV)/RES/281, 27 Sept. 1971.

248 See the statement made by the Director-General of IAEA in the 26th session of the UN General Assembly in A/PV. 1979 (prov.), 8 Nov. 1971, pp. 7-10.

249 The IAEA Director-General before the General Conference of the IAEA, September 1973. IAEA, Press Release C/XVII/4, 18 Sept. 1973, p. 4.

In its report to the Second Session of the Preparatory Committee for the Second NPT Review Conference meeting in Geneva in August of 1979, the IAEA pointed out that during the five year period 1974-1978 technical assistance provided by the Agency amounted to \$45.7 million compared with \$23.8 million during the preceding five years. The Agency also pointed out that the target for voluntary contributions in respect of the 1980 regular programme should be \$10.5 million as compared to \$4.5 million in 1975. The Agency warned, however, that such a rise will still be offset to some extent by inflation.

Moreover, the IAEA reported that over and above the voluntary contributions to the General Fund which are given without limitation as to use, certain Member States have also made additional amounts available for technical assistance on the understanding that such funds be used for non-nuclear-weapon States Parties to the NPT, an issue that we have already dealt with above.

In its report, the IAEA concedes that it should recognize the strong interest in nuclear power in many of its developing Member States and plan its programmes accordingly. The Agency points out that it could, with increased funds and without changing the basic element of its technical assistance, play a more important role in assuming the availability of specialized knowledge not only in pre-project phases and for regulatory activities, but also for the execution and operation of plants for power production and for fuel cycle processes.²⁵⁰

The second resolution adopted by the Conference recommended that "the IAEA should undertake to examine the basis on which arrangements can be made by the Agency to secure finances from international sources for the creation of a Special Nuclear Fund ... for financing nuclear projects in the terri-

250 See Preparatory Committee for the Second Review Conference of the Parties to the NPT, IAEA Activities under Article IV of the NPT (NPT/CONF.II/PC.II/8, 25 July 1979), pp. 4, 8, 9-16, and 37-40; and Annex I. A, B, D, E and F.

tories of non-nuclear-weapon States ..."²⁵¹ The "fund" idea, however, was stillborn. In its first report relating to the Conference's recommendations, the Board of Governors of the IAEA reached the conclusion that there was no prospect that those member States whose support would be indispensable for the establishment and maintenance of such a fund would be agreeable to its establishment.²⁵² The Agency continued, however, to seek ways and means to secure financing for nuclear projects in developing countries.²⁵³ The Fourth International Conference on the Peaceful Uses of Atomic Energy held in Geneva in 1971 helped to stimulate the issue further. As a result, the IAEA concentrated on an in-depth survey to assess the extent of the market in 14 developing countries for various types and sizes of nuclear power plants that for economic reasons could justifiably be built during 1980-1989. The IBRD, the Inter-American Development Bank and several States helped to finance the project. The results of the survey were first made available in August 1973 and later reviewed in 1974, taking into account the drastic increase in world oil prices which occurred in the latter part of 1973 as well as the changes in the economics of nuclear power that took place in early 1974.

The survey has shown, under conditions prevailing at that time, that for nuclear power plants to be commissioned in developing countries in the year 1980-1989, there is no economically justifiable market in unit sizes below 200MW. The market survey has helped to put at the Agency's disposal advanced computer-based analytical methods for making estimates

251 For the full text of the resolution, see Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution I, pp. 15-16. The draft of that resolution was submitted by Pakistan (A/CONF.35/C.2/L.5/Rev. 2, 23 Sept. 1968).

252 IAEA Doc. GC(XIII)/INF/110, 29 July 1969, para. 101.

253 See IAEA Docs. GC(XIII)/RES/256 in UN Doc. A/7677/Add. 2, 7 Nov. 1969, p. 17; GC(XIV)/436, 19 Aug. 1970, paras. 2-4 and Anns. I and II, pp. 3-15; and IAEA, Annual Report, 1 July 1970-30 June 1971 (GC(XV)/455), para. 93.

of the costs of alternative long-term patterns of expansion of national or regional electric power systems. This capability has been used in technical assistance projects and in advising Member States of the planning of nuclear power programmes.²⁵⁴

At the 1975 NPT Review Conference, Mexico, Nigeria and the Philippines submitted a draft resolution calling for the establishment of a "Special Fund" financed by the developed non-nuclear-weapon States and the three nuclear-weapon States Parties to the NPT to provide the developing non-nuclear-weapon States Parties to the Treaty with assistance in the peaceful uses of nuclear energy research reactors and fuels. The same draft resolution also called for the establishment of a "Special Nuclear Fund" financed in the same manner, to provide financing under concessional terms for nuclear projects in the territories of the developing non-nuclear-weapon States Parties to the Treaty.²⁵⁵ These two ideas were not supported by developed States at the Conference. These ambitious schemes were reduced to the mere recommendation, earlier referred to, that developed States would respond to "technically sound" requests for technical assistance.

So far, financing of major nuclear projects have been provided through bilateral arrangements.

(ii) Special Fissionable Materials: As previously mentioned, the Conference of Non-Nuclear-Weapon States requested the IAEA to consider the establishment of a "Fund of Special Fissionable Materials". Although a so-called fund did exist within the framework of the IAEA, the Conference's request had the virtue of providing a new impetus to the availability and provision of special fissionable materials through the IAEA, on the same general conditions as those applying to bilateral supply.

254 See Market Survey for Nuclear Power in Developing Countries: 1974 Edition (Vienna: IAEA, 1974) and Review Conference of the Parties to the NPT, IAEA Activities Under Article IV of the NPT: Analytical and Technical Report (NPT/CONF/11, 17 Feb. 1975), pp. 28-29.

255 Doc. NPT/CONF/C.II/L.2, 20 May 1975.

In its report of July 1979 to the Second Session of the Preparatory Committee of the Second Review Conference of the Parties to the NPT, the IAEA points out that experience has shown that the nuclear material offered by the supplying Member States has so far been sufficient to meet demands. By August 1978 about 235 transfers of such material, some of them gifts, had been made to 38 recipient countries. Almost all transfers were for research reactors or other research purposes. Contracts have been concluded for the supply of enriched uranium for only two power reactors in Mexico and one in Yugoslavia. Supplier States have been Belgium, Canada, France, the FRG, Sweden, the USSR, the UK and the US. Apart from this and as earlier mentioned, the United States and the Soviet Union showed readiness to allocate special nuclear material to the Parties to the NPT. More specifically, the United States announced in 1976 that henceforth it would give preference to NPT Parties in allocating its annual \$50,000 dollars gift of special nuclear material. As to the Soviet Union, it was prepared to contribute 50 Kilograms of 235 U free of charge to the Agency's fund for the five-year period ahead to meet the needs of non-nuclear-weapon States Party to the NPT.²⁵⁶

With regard to equipment, their direct provision by the IAEA from resources made available to it is one of the three principal elements of IAEA's technical assistance programmes to developing countries. In the period 1970-1978, the equipment element was 37%, whereas the experts and fellowships elements were 33% and 30% respectively. In its role as an intermediary, the IAEA has been turned to, in many cases, by a supplier, by a potential recipient, or by both. Furthermore, the IAEA assists potential recipients or purchasers in contacting potential suppliers of equipment which they want to obtain bilaterally. The Agency's own laboratories use donated

²⁵⁶ Preparatory Committee of the Second Review Conference of the Parties to the NPT, IAEA Activities Under Article IV of NPT (NPT/CONF.II/PC. II/8, 25 July 1979), pp. 18-20, 37-40 and Ann.II.C.

equipment to promote the peaceful uses of nuclear energy, particularly in the developing countries.²⁵⁷

(iii) Nuclear Information : The IAEA seized the opportunity of the resolution adopted by the Conference of Non-Nuclear-Weapon States on this aspect,²⁵⁸ to explain its expanding role in compiling and disseminating information concerning the peaceful uses of nuclear energy, especially its project of the computer-based International Nuclear Information System (INIS).²⁵⁹ However, and aside from information on the techniques of enriching uranium, the Agency noted that some technological information, particularly that involving manufacturing processes, was being withheld for commercial reasons. It realised that no workable and acceptable scheme for dealing with this matter by intergovernmental action was likely to emerge. In its view, it could probably best be tackled either bilaterally or within the framework of close regional arrangements.²⁶⁰

In its aforementioned report to the Preparatory Committee by the Second NPT Review Conference, the IAEA has also seized the opportunity to elaborate on its role in the field of transfer of scientific and technical information. The IAEA pointed out that it organizes an average of 14 international scientific conferences and symposia a year. It referred to its role in convening the International Conference on Nuclear Power and Its Fuel Cycle, which was held in Salzburg, Austria in 1977. It emphasized the fact that it became one of the leading publishers in the world in the field of nuclear science and technology.

257 Ibid., p. 17 and Ann.II.B.

258 Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution H (I), p. 14.

259 See IAEA Docs. GC(XIII)/INF/110, 29 July 1969, paras. 44-58; GC(XIV)/INF/120, 6 Aug. 1970, paras. 13-14 and 17; IAEA, Annual Report, 1 July 1970 - 30 June 1971 (GC(XV)/455), paras. 105-109; and IAEA, Annual Report, 1 July 1971 - 30 June 1972 (GC(XVI)/480), paras. 13 and 105-109.

260 See IAEA Docs. GC(XIII)/INF/110, 29 July 1969, paras 60-63 and GC(XIV)/INF/120, 6 Aug. 1970, para. 16.

It explained that at present 61 countries and 13 international organisations provide input to INIS, and that it is estimated that INIS covers approximately 90% of the world's publications on nuclear science and technology. Its role in co-operating in gathering nuclear data and in making fellowships available has been stressed. In 1975, the IAEA expanded the objectives of its training programme by offering courses on nuclear power projects. More scientific visits were awarded to research workers from developing countries. These are just a few examples of the expanding role of the IAEA in this field.

(iv) Composition of IAEA Board of Governors : Amendment of Article VI of IAEA Statute : The Conference of Non-Nuclear-Weapon States adopted two resolutions in this respect, which reflected two complementary preoccupations. In a first resolution which was sponsored by Austria, Denmark, Finland, Japan, Norway, Sweden and Switzerland, the Conference expressed its assumption that IAEA "will examine at an appropriate time its procedures and arrangements, as well as the question of the composition of the Board of Governors, with a view to adapting them as necessary in the light of its new responsibilities."²⁶¹ (Emphasis added.) The other resolution which was sponsored by Cameroon, Dahomey, Ivory Coast, Kenya, Uganda, Tanzania and Zambia, recommended to the Agency that "representation on its Board of Governors be broadened so as to reflect equitable geographical distribution and the views of a broad spectrum of the developing countries."²⁶² (Emphasis added.)

At the same time, the Twelfth General Conference of IAEA also adopted a resolution requesting the Board of Governors to review Article VI.²⁶³

261 Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution H (V), p. 15.

262 Ibid., Resolution K, pp. 17-18.

263 GC(XII)/RES/241, 30 Sept. 1968 in IAEA Doc. GC(XII)/Resolutions (1968).

The particular interest attached to the Board's composition emanates from the fact that the Board is the central organ of the Organisation. Its role in implementing the relevant provisions of the NPT was expected to be a major one.

In February 1969, the Board of Governors of the IAEA decided to set up an Ad Hoc Committee of the Whole to Review Article VI. Around 50 members of the IAEA took part in its work.²⁶⁴

Without going into the several proposals submitted to the Committee,²⁶⁵ which is beyond the scope of this study, each proposal, as well put by one observer, "was more or less subtly designed to assure the sponsor of either a para-permanent seat on the Board, or at least of an improved chance of periodic election by increasing the number of seats of its area or by reducing the number of States in that area or by changing the selection criteria."²⁶⁶

In particular, Italy and the Federal Republic of Germany, neither of which enjoyed a designated seat in the Board, and which have made considerable progress in the field of nuclear energy, were very active and keen on guaranteeing such a seat in a newly-constituted Board. As a matter of fact, it was basically an Italian proposal sponsored by another 21 countries which was finally approved by the Fourteenth General Conference of the IAEA held in Vienna in September 1970.²⁶⁷ Sub-paragraphs

264 For the records of the Committee, see IAEA Docs. (GOV/COM. 20/OR.1-11.

265 See IAEA Docs. GOV/COM.20/2 (Mexico); 4 (UAR); 5 (the Democratic Republic of Congo); 8 and 8/Mod. 1 (Belgium); 10 (Italy); 14 (Nigeria); 15 (UAR); 15/Add. 1 and 15/Rev. 1/Add. 1 (22 countries led by Italy); and 18 (7 Eastern European States). See also IAEA Docs. GC(XIV)/437, 7 Aug. 1970 and Adds. 1-2.

266 Paul C. Szasz, op.cit., p. 143.

267 GC(XIV)/RES/272, 28 Sept. 1970. The proposal was approved by 54 votes in favour, 9 against (the Soviet Union and other Eastern European countries) and 13 abstentions. GC(XIV)/OR.142, 28 Sept. 1970, para. 19. Both the FRG

1, 2 and 3 of paragraph A of Article VI were replaced by the two following paragraphs :

"1. The outgoing Board of Governors shall designate for membership on the Board the nine members most advanced in the technology of atomic energy including the production of source materials, and the member most advanced in the technology of atomic energy including the production of source materials in each of the following areas in which none of the aforesaid nine is located :

- (1) North America
- (2) Latin America
- (3) Western Europe
- (4) Eastern Europe
- (5) Africa
- (6) Middle East and South Asia
- (7) South East Asia and the Pacific
- (8) Far East.

2. The General Conference shall elect to membership of the Board of Governors :

- (a) Twenty members, with due regard to equitable representation on the Board as a whole of the members in the areas listed in sub-paragraph A-1 of this article, so that the Board shall at all times include in this category five representatives of the area of Latin America, four representatives of the area of Western Europe, three representatives of the area of Eastern Europe, four representatives of the area of Africa, two representatives of the area of the Middle East and South Asia, one representative of the area of South East Asia and the Pacific, and one representative of the area of the Far East. No member in this category in any one term of office will be eligible for re-election in the same category for the following term of office; and
- (b) One further member from among the members in the following areas :
Middle East and South Asia,
South East Asia and the Pacific,
Far East;
- (c) One further member from among the members in

and Italy are known to have exerted diplomatic pressure on IAEA members for a rapid acceptance of the amendment.

the following areas :

Africa,
Middle East and South Asia,
South East Asia and the Pacific."²⁶⁸

The possibility that both the FRG and Italy would be designated among the nine most advanced to serve as members of the Board, seems to have been the main reason why the Soviet Union and other Eastern European countries voted against the amendment. For the Soviet Union "the changes made in the course of its evolution have not eliminated a fundamental weakness, namely that it would lead to an unwarranted alteration and enlargement of the designated membership of the Board." It stressed that the amendment "would upset the political balance that is essential to the Agency if it is to carry out its activities in a normal way - activities which, in the light of its new and important responsibilities in connection with the Treaty on the Non-Proliferation of Nuclear Weapons, assume particular importance."²⁶⁹

Moreover, the representative of the Soviet Union, while explaining the position of his country just before the voting on the amendment took place in the General Conference of IAEA, said that the countries which were so insistently claiming permanent seats on the Board should ratify the NPT as soon as possible.²⁷⁰ This was an implicit allusion to the FRG and Italy which were postponing their ratifications until they had concluded together with other Euratom countries an agreement with the IAEA on the application of safeguards as required by Article III of the NPT.²⁷¹

268 For other minor corresponding adjustments in paragraphs B, C, and D of Article VI, see the full text of the amendment in paragraph 1 of IAEA's General Conference resolution GC(XIV)/RES/272, 28 Sept. 1970.

269 IAEA Doc. GC(XIV)/437, 7 Aug. 1970, p. 10.

270 IAEA Doc. GC(XIV)/OR.142, 28 Sept. 1970.

271 The Agreement was signed on 5 April 1973. IAEA Press Release 73/5, 5 Apr. 1973. See later Chapter 10.

At any rate, the increase in the representation of the area of Eastern Europe from one to three in the category of elective seats might in the long run prove to be satisfactory for the countries of this area.

The amendment, in fact, provided the following significant changes :

- The number of designated members most advanced in the technology of atomic energy, including the production of source materials was increased from 5 to 9.
- The area of Africa and the Middle East, and the area of South Asia were replaced by the area of Africa and the area of Middle East and South Asia. This change was made in compliance with African wishes.
- Designations were no longer provided for the categories of "other producers of source material" which had 2 seats and "a supplier of technical assistance" which had one seat.
- The number of elected members increased from 12 to 22, and the representation of areas in this category was modified so as to allow for a better representation especially for Latin America, Western Europe, Eastern Europe and Africa.
- The number of "floating" seats (non-geographic seats filled by election) increased from one to two as indicated in paragraph 2(b) and (c) above. However, the "floating" seats were reserved for four areas.

The amendment entered into force on 1 June 1973, the date on which it had been accepted by two thirds of all members of the IAEA according to Article XVIII.C(ii) of the Statute.²⁷² Few days later, on the 13th of June, 12 countries were designated by the Board for membership of the Board in 1973/74. The 12 countries are : Australia, Brazil, Canada, France, the Federal Republic of Germany (FRG), India, Italy, Japan, South Africa,

272 IAEA Doc. INFCIRC/159/Rev. 3, 12 June 1973.

the USSR, the United Kingdom and the United States.²⁷³ At the 17th session of the IAEA General Conference (September 1973), elections were held to fill elective seats and the new Board was finally constituted for the first time of 34 Member States.²⁷⁴

It is to be noted that all the designated countries, with the exception of Italy and the FRG, were designated members of the outgoing Board. The Board, however, in designating the 12 members did not specify which were the members designated as the nine most advanced and those designated as the most advanced in their areas. This vagueness should later help to accommodate the People's Republic of China as one of the nine most advanced members.²⁷⁵ This would bring the number of designated members to 13 and total membership to 35. The attribution of the designated seats would be as follows :

Area	Designated as one of the nine most advanced States	Designated as the most advanced in its area	Number
North America	Canada and the United States		2
Latin America		Brazil (and Argentina alternating)	1

273 IAEA Docs. GOV/OR.456 (prov.), 27 June 1973, p. 10 and GC(XVII)/502, 12 July 1973.

274 IAEA Press Release 73/14, 25 Sept. 1973.

275 Since the expulsion of "Chiang Kai-Shek's representatives" from the IAEA in December 1971, the People's Republic of China has so far refrained from becoming a member of the Agency. China's position is mainly due to the involvement of the IAEA in implementing the NPT, a treaty that China has not approved and especially when it would have to review, as a member of the Board, IAEA safeguards activities in Taiwan considered to be part of China, a State which also happens to be a nuclear-weapon State as defined by the NPT exempted from the application of NPT safeguards.

Western Europe	France, the Federal Republic of Germany, Italy and the United Kingdom	4
Eastern Europe	The USSR	1
Africa	Egypt*	1
Middle East and South Asia	India	1
South East Asia and the Pacific	Australia	1
Far East	China and Japan	2
<hr/>		
Total	9 + 4 =	13

* As of 1977 Egypt replaced South Africa which was removed from this position as a result of its apartheid policies. Egypt's position is not without challenge from countries such as Niger, a uranium producing country.

In concluding this brief review of IAEA's activities, it must be said that much is and will be expected from the Agency in the promotion of the peaceful uses of nuclear energy as a result of the NPT. Although the results so far achieved in this respect are significant, they still fall short of the high expectations of the developing world. First steps have been taken for securing more technical assistance funds and financing the introduction of nuclear power plants in the developing countries. Better conditions for the procurement of special fissionable materials have been promised. In the field of exchange of information, difficulties still persist as a result of commercial competition and industrial secrets. It is considered, however, that scientific conferences and meetings encourage the dissemination and the declassifications of important information. The Agency is also very much involved, as will be shown in the next chapter, in the field of the peaceful nuclear explosions. Finally, the enlargement of the IAEA Board has been sought for many years and now that this objective has materialized, it is hoped that the Agency will continue to pursue with more vigour and determination its expanded role under the NPT.

(b) United Nations Development Programme (UNDP)

The Conference of Non-Nuclear-Weapon States requested the UN General Assembly "to consider at its twenty-third regular session the establishment, within the United Nations Development Programme, of a 'Nuclear Technology Research and Development Programme' to be executed as a matter of priority with the co-operation of the International Atomic Energy Agency for the benefit of the developing countries".²⁷⁶

The resolution was duly transmitted by the UN Secretary-General to the Administrator of the UNDP. The latter replied that "the Governing Council policy has not been to approve autonomous programmes such as would seem to be implied by the proposed 'nuclear technology research and development programme'." The Administrator believed, however, that the activities of UNDP in the field of nuclear energy constituted an on-going programme which could be strengthened to conform to the intention of the resolution of the Conference of Non-Nuclear-Weapon States, provided that the Governments of developing countries assigned sufficiently high priority to additional activities in this field when requesting assistance from the UNDP.²⁷⁷ The idea of the new "programme", therefore, was not welcomed by the UNDP, and except for a UN General Assembly resolution adopted at its twenty-third session inviting, inter alia, the UNDP to continue the study of the recommendations of the Conference,²⁷⁸ the idea did not receive further attention.

The Administrator of the UNDP, in his answer to the UN Secretary-General, also stated :

276 Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution J (A.1 and 3, and C), p. 17.

277 GAOR, 23rd Sess., Anns. (Vol. I), a.i. 96, Doc. A/7364, 29 Nov. 1968.

278 GA Res. 2456 A(XXIII), 20 Dec. 1968, para. 5. Ibid., Suppl. No. 18 (A/7218), p. 13.

"In view of the limited funds at present available to the United Nations Development Programme, I believe that the Governing Council would agree that the Programme resources can most appropriately be applied to pre-investment studies in the field of large-scale nuclear energy; to training, research, and industrial advisory functions in the field of isotopes and ionizing radiations; and to technical and economic studies in the field of peaceful nuclear explosives, only if this field reaches the stage of practical application in the case of the non-nuclear-weapon States. Naturally, in considering requests for assistance in the field of atomic energy, I believe that the Governing Council would wish to continue to be guided, as in other fields, by its usual criteria of project soundness and priority, including the ability of the requesting Government to provide the appropriate counterpart facilities and qualified national staff, and taking account of the likelihood of investment follow-up in appropriate cases."

The role of the UNDP in the nuclear field has been the subject of successive reports on the implementation of the results of the Conference of Non-Nuclear-Weapon States.

Briefly, it appeared from one of those reports that for the past several years, only about 2 per cent (approximately one million Dollars) of the UNDP technical assistance component was devoted to applications of nuclear technology. By 1971, the amount estimated was 1.132.000 Dollars. In 1978 it reached the figure of 2.954.000 Dollars.²⁸⁰ The funds are administered by the IAEA's Division of Technical Assistance.

With respect to UNDP large-scale projects in the nuclear field, which used to be called UNDP (Special Fund) projects, the IAEA is the executing Agency. By mid-1972, UNDP large-scale projects being carried out by the IAEA numbered nine projects in eight countries. In June 1979, the IAEA was

279 Ibid., Anns. (Vol. I), a.i. 96, Doc. A/7364, 29 Nov. 1968. p. 7.

280 IAEA, Annual Report, 1 July 1971 - 30 June 1972 (GC (XVI)/480), para. 21 and The Annual Report for 1978 (GC(XXIII)/610), para. 35.

executing 25 large-scale UNDP projects compared with 15 in June 1974.²⁸¹

The Director-General of IAEA, Dr. Eklund, acknowledged that the large-scale projects that the IAEA is executing on behalf of the UNDP "reflects the growing interest and capability of developing countries in carrying out larger projects in the nuclear energy field. It also indicates that the need for international assistance in this field is growing." In this connexion, Dr. Eklund went on to say that "(t)he industrial countries, and particularly the nuclear-weapon States, will certainly be called upon to fulfil the commitments they have made in Article IV of the Treaty."²⁸²

To conclude this brief review of UNDP's role in promoting the peaceful uses of nuclear energy, it must be said that the developing countries must take full advantage of the funds available for technical assistance within the UNDP programme. As noted by the IAEA, nuclear energy projects are in many cases relegated to such a low priority that no such projects can be carried out with the UNDP resources available for those countries.²⁸³ As to the large-scale projects, it is suggested that the developing countries should review their requirements to ascertain whether they wish to give higher priority to nuclear projects, especially of the kind already successfully executed in other countries.²⁸⁴ On the other hand, the advanced countries should make more funds available so that the UNDP may be able to cope with future requests for technical assistance and large-scale projects.

281 For a comparison between 1972 and 1979, see IAEA, Annual Report, 1 July 1971-30 June 1972 (GC(XVI)/480), para. 29; and Preparatory Committee for the Second Review Conference of the Parties to the NPT, IAEA Activities under Article IV of NPT (NPT/CONF.II/PC.II/8, 25 July 1979), p. 4 and Ann. I.C.

282 A/PV. 1979 (prov.), 8 Nov. 1971, p. 11.

283 IAEA Doc. GC(XIII)/INF/110, 29 July 1969, para. 86.

284 Contributions of Nuclear Technology (A/7568), para. 260.

(c) International Bank for Reconstruction and Development (IBRD)

The Conference of Non-Nuclear-Weapon States requested the IBRD "to consider ... the establishment for the benefit of the developing countries of a 'Programme for the Use of Nuclear Energy in Economic Development Projects' which would be a matter of priority and under which finance would be granted on the most favourable terms as regards interest and repayment periods".²⁸⁵

The resolution was transmitted by the UN Secretary-General to the President of the IBRD. The latter's reply included the following passage :

"The Bank has given considerable thought to the conditions under which nuclear energy may become economic for power generation and water desalination in the developing countries. We are continuing to keep in close touch with developments in this field, and are ready to give sympathetic consideration to requests for the financing of economically justified projects of this kind. We would find it necessary, however, to apply to them the same criteria we apply to all of our other projects ..."²⁸⁶ (Emphasis added.)

It is quite significant that in his answer to the UN Secretary-General's letter, the President of the IBRD did not mention in a single paragraph the proposed "Programme for the Use of Nuclear Energy in Economic Development Projects". Except for a UN General Assembly resolution adopted at its twenty-third session inviting, inter alia, the IBRD to continue the study of the recommendations of the Conference,²⁸⁷ the proposed "Programme" did not receive any attention.

285 Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution J (A.2-3 and C), p. 17.

286 For the full text of the reply, see GAOR, 23rd Sess., Anns. (Vol. I), a.i. 96, Doc. A/7327, 14 Nov. 1968, pp. 5-6.

287 GA Res. 2456 A(XXIII), 20 Dec. 1968, para. 5. Ibid., Suppl. No. 18 (A/7218), p. 13.

In applying normal banking criteria to any application for a loan, the IBRD was found not to be taking into account the indirect benefits that were likely to result from the introduction of nuclear technology in a developing country that had sufficient industrial and technical infrastructure in other respects.²⁸⁸

By 1970, in response to a renewed pledge by the UN General Assembly at its 24th session for co-operation in "finding ways and means of financing meritorious nuclear projects",²⁸⁸ the President of the IBRD informed the UN Secretary-General in a more encouraging note that the Bank was ready to help the IAEA in connexion with its study of the possible ways and means of financing nuclear projects. He further informed the Secretary-General that :

"... the Bank is prepared to consider requests for the financing of nuclear energy projects whenever they represent the most advantageous of the alternatives for expanding generating capacity in our member countries. In this respect I should note that in appraising projects, the Bank always considers their short- and long-term benefits to the economy."²⁹⁰

A further encouraging development was the establishment by the IBRD in 1970 of a Special Projects Department, one of whose functions is to seek out and try to develop nuclear power projects satisfying the Bank's criteria.²⁹¹

Moreover, the IBRD, among others, helped to finance the aforementioned "in-depth survey" carried out by the IAEA to assess the extent of the market in 14 developing countries for various types and sizes of nuclear power plants.

288 See Contributions of Nuclear Technology (A/7568), paras. 144, 255 and 262; and IAEA Doc. GC(XIII)/110, 29 July 1969, para. 97.

289 GA Res. 2605 A(XXIV), 16 Dec. 1969, para. 4. GAOR, 23rd Sess., Suppl. No. 18 (A/7218), p. 19.

290 UN Doc. A/8079, 6 Oct. 1970, para. 10.

291 A/PV. 1917 (prov.), 4 Dec. 1970, pp. 12-15 (IAEA's Director-General).

Unfortunately, the IAEA in its 1979 report to the Preparatory Committee for the Second Review Conference of the Parties to the NPT states that international financing from IBRD is not likely to be available for complete nuclear power projects in view of the limited funds available for financing in the nuclear sector. However, partial financing from IBRD could, as pointed out by the IAEA, be of great importance as it would help considerably in obtaining and assuring the main part of the loans from other sources. It is in this context that the IAEA noted that some industrialized countries have stressed the need for an expanded role of some international organizations including IBRD and OECD in energy development and financing in the developing world.²⁹²

Before concluding, we would merely wish to draw attention to the fact that even if the financial problems involved in introducing nuclear power plants are resolved, there remains a problem of a different kind and that is the protection of the environment from the effects of large-scale production of electric power by nuclear power plants. The problem was examined in different forums, e.g. the IAEA, the Fourth International Conference of the Peaceful Uses of Atomic Energy (Geneva, 1971), the United Nations Conference on the Human Environment (Stockholm, 1972), the International Conference on Nuclear Power and its Fuel Cycle (Salzburg, 1977), the International Nuclear Fuel Cycle Evaluation and the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) which in its 1972 report for the first time devoted much of its attention to this aspect.²⁹³ The spread of nuclear power plants, therefore, will

292 Preparatory Committee for the Second Review Conference of the Parties to the NPT, IAEA Activities Under Article IV of NPT (NPT/CONF.II/PC.II/8, 25 July 1979), p. 8.

293 See Peaceful Uses of Atomic Energy, Vol. 11; UN Doc. A/CONF.48/14, 3 July 1972; and GAOR, 27th Sess., Suppl. No. 25 (A/8725). Dr. Eklund, the Director General of IAEA has tried to dispel fears of nuclear power in pointing out to the 1979 UN General Assembly Session that the findings of the UNSCEAR in its 1977 report indicated that the radiation emitted by all nuclear power plants now operating throughout the world may cause about 60

also depend to a large extent on the solution of the environmental problems connected with them as well as their acceptance by public opinion. The accident at the Three Mile Island in the United States, and the renegation of a country such as Austria in 1978 of the use of nuclear fission for providing electrical energy²⁹⁴ are certainly serious setbacks for the peaceful application of nuclear energy. They do not seem, however, to constitute so far a trend or a threat to the further development in this field.

* * * * *

To sum up, if Article IV of the NPT is read literally, it may leave the impression that it reflects a sort of calculated balance of rights and obligations between the nuclear-weapon and the non-nuclear-weapon States. However, the article emerged and evolved under certain conditions that leave no doubt that it is a compensatory article to the sole benefit of the non-nuclear-weapon States for having renounced the acquisition of nuclear weapons. As the majority of countries has never entertained the idea of acquiring nuclear weapons under any circumstances, and as the majority is also not expected to belong to the category of "contributing States", Article IV would appear as a gratuitous gain.

The gain, however, cannot be easily measured due to the vagueness of the language in which the article was drafted. This vagueness is compensated by the negotiating history of Article IV and its early implementation. Both phases have con-

deaths from cancer each year. This compares with 6.700 cancer deaths resulting from the medical uses of X-rays and radiation and with 35.000 cancer deaths from natural radiation. UN Doc. A/34/PV.52 (prov.), 5 Nov. 1979, pp. 8-10.

294 See Nuclear Law Bulletin (NEA), Vol. 23, June 1979, p. 8.

tributed, in many instances, in divulging the real meaning and the implications of its provisions.

The greatest value of Article IV is that it generated a process which has gone far beyond the imagination and expectations of its founders. This is evidenced by the results of the Conference of Non-Nuclear-Weapon States and their implementation. Moreover, many developments which are taking place in the field of peaceful uses of nuclear energy could also be indirectly related to the climate created by Article IV. Intensive nuclear co-operation between the two super-Powers and among the European States is but one example.

Bilateral nuclear co-operation is in fact flourishing. Regional multilateral nuclear co-operation whether within or outside an inter-governmental organisation is either involved in new ventures or strengthening old strings.

Of all the international organisations or organs connected with the peaceful uses of nuclear energy, the International Atomic Energy Agency has emerged as the unchallenged mother organisation. Its role in implementing the NPT is being strengthened and the enlargement of its Board of Governors brought new blood and vigour to the Organization. But as rightly pointed out by the IAEA itself, it is difficult to estimate how much of the growth and development of the various programmes are attributable to the implementation of Article IV and how much is due to the normal evolution of the IAEA's work. On the other hand, it is indisputable that full implementation of Article IV would continue to be important to the IAEA in meeting its own statutory objectives and functions. However, the new global role of the Agency can be better appreciated in the light of its role in the field of peaceful nuclear explosions and the application of safeguards required by Article III of the NPT.

The picture, however, is not so rosy. The needs of the developing countries are still not satisfactorily met. In the field of technical assistance, more funds are needed to cope

with the assistance requested. In the field of financing major nuclear projects, no immediate results are foreseen.

In conclusion, it is quite paradoxical that in seeking the prevention of nuclear weapons' proliferation by means of an arms control measure, the question of peaceful uses of nuclear energy starts progressively to take dramatic dimensions and introduces new problems in need of solutions. The problems are real and if they are not solved to the satisfaction of the Parties to the Treaty, there will always be a danger that they may call the Treaty into question.



CHAPTER 7

The Peaceful Applications of Nuclear Explosions :

Article V

Text :

Article V

Each Party to the Treaty undertakes to take appropriate measures to ensure that, in accordance with this Treaty, under appropriate international observation and through appropriate international procedures, potential benefits from any peaceful applications of nuclear explosions will be made available to non-nuclear-weapon States Party to the Treaty on a non-discriminatory basis and that the charge to such Parties for the explosive devices used will be as low as possible and exclude any charge for research and development. Non-nuclear-weapon States Party to the Treaty shall be able to obtain such benefits, pursuant to a special international agreement or agreements, through an appropriate international body with adequate representation of non-nuclear-weapon States. Negotiations on this subject shall commence as soon as possible after the Treaty enters into force. Non-nuclear-weapon States Party to the Treaty so desiring may also obtain such benefits pursuant to bilateral agreements

* * * * *

The peaceful applications of nuclear explosions constitute one specific aspect of the peaceful uses of nuclear energy to which Article IV equally applies. Therefore, in analysing Article V of the NPT, the general principles enunciated in the preceding Article should always be kept in mind.

Ever since the United States and the Soviet Union expressed their intentions of extending the treaty's inhibitions on nuclear weapons to other nuclear explosive devices, the peaceful applications of nuclear explosions had received wide attention during the NPT negotiations. This attention was greatly amplified by repeated promises that the potential benefits of peaceful nuclear explosions would be made available to non-nuclear-weapon States on favourable terms. These promises were looked upon by the latter as a compensation for their renunciation of all nuclear explosive devices. This compensatory aspect was reflected in their statements in different forums¹ as well as in the final agenda of the Conference of Non-Nuclear-Weapon States.² However, it should be recalled that a minority view represented by Brazil and India resisted the idea of waiving the right to produce, by their own means, nuclear explosive devices for peaceful purposes.

Since the question of peaceful nuclear explosions was raised by the United States for the first time at the ENDC in mid-1966,³ the early treaty drafts of 1965 and 1966 were silent in this respect.

On 21 March 1967, the United States proposed at the ENDC five general principles on the basis of which the sharing of any potential benefits of peaceful nuclear explosions might be organized. The United States was of the opinion that this was a separate issue to be settled by a separate agreement.⁴ The

1 For example, see ENDC/PV. 327, 31 Aug. 1967, para. 57 (Nigeria); ENDC/PV. 331, 19 Sept. 1967, paras. 12-13 (Mexico); ENDC/PV. 333, 26 Sept. 1967, para. 22 (UAR); ENDC/PV. 336, 5 Oct. 1967, para. 49 (Ethiopia); A/C.1/PV. 1567 (prov.), 14 May 1968, p. 26 (New Zealand); and A/CONF.35/C.2/SR.9, 17 Sept. 1968, p. 95 (Ireland).

2 UN Doc. A/CONF.35/10, 1 Oct. 1968, Ann. III, p. 2.

3 ENDC/PV. 280, 9 Aug. 1966, pp. 14-15.

4 ENDC/PV. 295, 21 Mar. 1967, paras. 72-79. On 21 February 1967, the US President, Mr. Lyndon Johnson, in a message to the ENDC, stated that the US is prepared to join other

Soviet Union was in agreement with the substance of the five principles⁵ as well as with settling the issue by means of a separate international agreement.⁶ Due to the importance of the five principles in contributing to the elaboration of Article V of the NPT, it would be quite pertinent to cite them at the outset of this chapter. They are as follows :

"First, if and when peaceful applications of nuclear explosives that are permissible under the test-ban Treaty ... prove technically and economically feasible, nuclear-weapon States should make available to other States nuclear explosive services for peaceful applications. Such a service would consist of performing the desired nuclear detonation under appropriate international observation with the nuclear device remaining under the custody and control of the State which performed the service.

... Second, there should be a means provided for non-nuclear-weapon States wishing to do so to request nuclear explosive services from the nuclear-weapon States through an international body, in which the non-nuclear-weapon States would participate. The international body might consider such matters as the feasibility of requested projects, priority among such requests, and necessary safety precautions ...

... Third, costs to non-nuclear-weapon States for peaceful-purpose detonations by nuclear States would be kept as low as possible. They should not, for example, include the costs of research and development.

... Fourth, there should be full consultation among nuclear and non-nuclear Parties to the limited test-ban Treaty about any amendment of that Treaty required in order to carry out feasible projects.

nuclear States in a commitment to make available nuclear explosive devices for peaceful purposes on a non-discriminatory basis under appropriate international safeguards. DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 3 (ENDC/187, 21 Feb. 1967).

5 Hearings on Military Implications of NPT, p. 126.

6 ENDC/PV. 297, 18 May 1967, para. 21 and ENDC/PV. 313, 13 July 1967, para. 13.

... Fifth, the conditions and procedures for international collaboration in accomplishing peaceful nuclear explosive projects would be developed in full consultation with the non-nuclear-weapon States."

At the ENDC opinion tended towards a basic commitment on this issue in the text of a non-proliferation treaty.⁸

The first identical treaty drafts of 24 August 1967 merely included a preambular paragraph which addressed itself particularly to the issue of peaceful nuclear explosions.⁹ The inclusion of this paragraph was found satisfactory only by a minority of members of the ENDC. A clearer commitment in the operative part of the treaty text was favoured. The Mexican delegation undertook the task of formulating the text of an article to be inserted in the treaty draft. The text borrowed from the language of the aforementioned five principles and the August 1967 preambular paragraph.¹⁰ Other minor amendments to the 24 August 1967 treaty drafts were also suggested by Romania and Nigeria.¹¹

The Mexican proposal was the only one which was taken into consideration by the United States and the Soviet Union in

7 ENDC/PV, 295, 21 Mar. 1967, paras. 73-78.

8 For example, see ENDC/PV. 288, 23 Feb. 1967, para. 20 (United Kingdom) and ENDC/PV. 319, 3 Aug. 1967, para. 35 (Canada).

9 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 6 (ENDC/192, 24 Aug. 1967) and Sec. 8 (ENDC/193, 24 Aug. 1967). See Appendix 3-D.

10 Ibid., Sec. 12 (ENDC/196, 19 Sept. 1967), Article IV-A. Switzerland, in its aide-mémoire submitted on 17 November 1967 to the two co-Chairmen of the ENDC, suggested that the intentions proposed in the preamble should constitute an article of the Treaty. Ibid., Sec. 21 (ENDC/204, 24 Nov. 1967), para. 3 (b).

11 Ibid., Sec. 14 (ENDC/199, 19 Oct. 1967), Preamble (para. 5) (Romania) and Sec. 18 (ENDC/202, 2 Nov. 1967), Article VI-A (third paragraph) (Nigeria).

their second identical treaty drafts of 18 January 1968. The first text of Article V was to a great extent drafted along the lines suggested by Mexico.¹²

The new article was welcomed by all the members of the ENDC. Nevertheless, Sweden was the only member to submit substantial formal amendments to the article.¹³ Nigeria had also submitted an amendment to the same article but it was later dropped.¹⁴

In the 11 March 1968 Joint US-Soviet draft, submitted to the twenty-second resumed session of the UN General Assembly, Article V remained intact.¹⁵

At the UN General Assembly, several changes were introduced to Article V in compliance with suggestions made by the Mexican delegation¹⁶ and worked out in particular with Mexico and two other Latin American countries, namely Colombia and Chile.¹⁷

Those developments in the elaboration of Article V will be evoked in detail in the course of our analysis of its final provisions. This brief survey helps to demonstrate the leading role Mexico played not only in bringing forward Article V but also in further formulating the Article to the satisfaction of the large majority of non-nuclear-weapon States.

12 Ibid., Sec. 7 (ENDC/192/Rev. 1, 18 Jan. 1968) and Sec. 9 (ENDC/193/Rev. 1, 18 Jan. 1968). See Appendix 3-E. The August 1967 preambular paragraph was not maintained.

13 Ibid., Sec. 32 (ENDC/216, 13 Feb. 1968).

14 Ibid., Sec. 36 (ENDC/220, 28 Feb. 1968) and Sec. 37 (ENDC/220/Rev. 1, 14 Mar. 1968). The Nigerian amendment, which was already referred to in Chapter 6, was aimed at instituting a reporting system on co-operation in the field of the peaceful uses of nuclear energy.

15 See Appendix 3-F.

16 A/C.1/PV. 1569 (prov.), 16 May 1968, pp. 31-40.

17 A/C.1/PV. 1577 (prov.), 31 May 1968, pp. 78-80.

In the phase of its implementation, Article V received considerable attention at the Conference of Non-Nuclear-Weapon States which adopted two resolutions relating to peaceful uses of nuclear explosions. We will revert to these later in this chapter.¹⁸

In reviewing the results of the Conference of Non-Nuclear-Weapon States, the twenty-third session of the UN General Assembly had given further attention to the issue, a practice which was followed by the subsequent sessions of the Assembly, especially after the 1975 NPT Review Conference. At the centre of all the discussions that had taken place in this forum was the role to be played by the IAEA in the domain of peaceful nuclear explosions. The latter organization had, in fact, taken important steps in this respect.

The analysis of Article V will be made in three parts. The first will deal with the obligation to take appropriate measures to ensure that potential benefits from any peaceful applications of nuclear explosions will be made available to non-nuclear-weapon States Party to the Treaty. The second part will deal with the modalities of enjoying the potential benefits of the technology and the third part with the channels through which such benefits could be obtained.

But before going into this analysis, a brief outline of the object of Article V, i.e. the peaceful applications of nuclear explosions, is necessary. It would particularly help to discover this potentially new technological and economical field and the prospects it holds for the near future in the light of the promises given and the obligations formally undertaken in the NPT.

¹⁸ Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution H (I), p. 14 and Resolution L, pp. 18-19.

I, The Peaceful Applications of Nuclear Explosions : A Brief Outline

The negotiating history of the NPT is full of examples of the potential peaceful applications of nuclear explosions as revealed and explained by the United States' representatives.¹⁹ The Soviet Union, on the other hand, did not reveal its plans and projects in this domain during the NPT negotiating period. It was later done in a different context as will be shown below. As to the third nuclear-weapon State participating in the negotiations, i.e., the United Kingdom, there was no intention on its part to venture into this field. Its interest was merely to concentrate on peripheral studies relating to the technology.

The sources on the development and status of peaceful nuclear explosions' technology are to be found either in the proceedings of international scientific and technological meetings which have discussed the issue as part of the general question of the peaceful uses of nuclear energy, (e.g., the Geneva conferences on the peaceful uses of the atom)²⁰ or in the results of those meetings which have concentrated solely on the issue as was the case with the five technical panels held in Vienna under the auspices of the IAEA in 1970, 1971, 1972, 1975 and 1976 as well as the Ad hoc Advisory Group on Nuclear Explosions for Peaceful Purposes established by the IAEA Board of Governors on 11 June 1975, which was required inter alia to examine the aspects of PNE's coming within the Agency's sphere of competence. The latter Group held five sessions in the period between September 1975 and August 1977

19 For example, see ENDC/PV. 359, 25 Jan. 1968, paras. 17-42 and ENDC/213, 25 Jan. 1968 (Project Gasbuggy for gas stimulation).

20 For the fourth conference held in Geneva in 1971, see Peaceful Uses of Atomic Energy, Vol. 7, pp. 209-245.

at the end of which it produced a major report dealing with all aspects relating to this technology.²¹

In the first place, some characteristics of nuclear explosives that made the new technology appear feasible must be underlined. Secondly, existing programmes of peaceful nuclear explosions will be briefly discussed, followed by a summary of the envisaged and tested applications. The feasibility of the technology will then be assessed in the light of certain international legal and political considerations. Finally, a prognosis on when it is expected to gain the full benefits of the technology will be evoked. But before embarking on all this, we must repeat that this is merely a brief outline little involved with complicated scientific and technological aspects. The main objective is to assess how far the obligations undertaken by virtue of Article V will probably be fulfilled in the near future.

1. Some Characteristics of Nuclear Explosives

The early nuclear weapon tests carried out by the United States in the Pacific and more specifically the first underwater nuclear test at Bikini Atoll in 1946, and the first thermonuclear explosion in 1949 gave birth to the idea that

21 Peaceful Nuclear Explosions: Phenomenology and Status Report, 1970. Proceedings of a Panel, Vienna, 2-6 March 1970 (Vienna: IAEA, 1970), Peaceful Nuclear Explosions II: Their Practical Applications. Proceedings of a Panel, Vienna, 18-22 January 1971 (Vienna: IAEA, 1971), Peaceful Nuclear Explosions III: Applications, Characteristics and Effects. Proceedings of a Panel, Vienna, 27 November-1 December 1972 (Vienna: IAEA, 1974), Peaceful Nuclear Explosions IV. Proceedings of a Technical Committee on the Peaceful Uses of Nuclear Explosions, Vienna, 20-24 January 1975 (Vienna: IAEA, 1975) and Peaceful Nuclear Explosions V. Proceedings of a Technical Committee on the Peaceful Uses of Nuclear Explosions, Vienna, 22-24 November 1976 (Vienna: IAEA, 1978); and Nuclear Explosions for Peaceful Purposes. Report of the Ad Hoc Advisory Group on Nuclear Explosions for Peaceful Purposes (Special reprint of IAEA Doc. GOV/1854 and attached as Annex H to Doc. NPT/CONF.II/PC.II/9, 25 July 1979), hereinafter cited as Nuclear Explosions for Peaceful Purposes.

nuclear explosions could also be used for peaceful purposes.

The underwater Bikini test demonstrated that an extremely powerful shock wave could be propagated in condensed matter by a nuclear explosion. The 1949 thermonuclear explosion showed that a large nuclear explosion could vaporize a Pacific Atoll, leaving a cavity where an island had previously existed.²² This brings us to the first characteristics of nuclear explosives as compared to chemical high explosives : the very rapid rate at which energy is delivered (a few millionths of a second compared with a few thousands) and the yielding of so much energy per unit of volume or weight.

Secondly, the production of thermonuclear explosives, by which energy is generated by the fusion of the two isotopes of hydrogen : deuterium and tritium, made it possible to reduce the cost of nuclear explosives and bring the scope of the problem of radiation down to more manageable proportions. The fission explosives made of uranium are too expensive and they release too much radiation.²³

By lowering the fission-to-fusion ratio in the thermonuclear explosives, which must be triggered by a fission device, radioactivity can be reduced to negligible levels. It might even be possible, some time in the future, to eliminate the fission device by creating a pure fusion explosive or the so-called "clean" explosive.²⁴

It was eloquently observed that "where in 1945 the uranium bomb offered the potential of vast supplies of low-cost elec-

22 Frank Barnaby, Man and the Atom. The Uses of Nuclear Energy (London : Thames and Hudson, 1971), p. 169.

23 See David B. Brooks and John V. Krutilla, Peaceful Uses of Nuclear Explosions : Some Economic Aspects (Washington, D.C. : Resources for the Future, 1969), pp. 5-6.

24 For some research done on pure fusion, see William R. Van Cleave, "The Nonproliferation Treaty and Fission-Free Explosive Research", Orbis, Vol. XI, No. 4, Winter 1968, pp. 1055-1066.

trical energy, ... the hydrogen bomb offered the potential of vast supplies of low-cost explosive energy."²⁵ The charges of thermonuclear explosives based on a design suitable for excavation applications were projected by the US Atomic Energy Commission (AEC) in 1964 to range from 350.000 dollars for 10 kiloton nuclear explosive to 600.000 dollars for a 2-megaton yield. The charges cover the costs of the nuclear materials, fabrication and assembly, and arming and firing services.²⁶ The costs of the equivalent TNT would be 4 million and 800 million dollars respectively.²⁷ This is just to show that going beyond a certain yield in nuclear explosives, charges tend to decrease considerably. An interim schedule of charges would be developed if commercial projects were to become possible.²⁸

Another characteristic closely connected with costs is the very limited size of the nuclear explosive. For example a 25-kiloton nuclear device - equivalent in explosive power to 25.000 tons of TNT - could be placed in a cylindrical bore-hole less than a metre in diameter whereas this quantity of TNT would require a spherical cavity 30 meters across resulting in an enormous cost of emplacement.²⁹

The last main characteristics relate to the two types of underground peaceful nuclear explosions so far being investigated. The nuclear explosive can be detonated near the surface,

25 Brooks and Krutilla, op.cit., p. 5. This is not to overlook the fact that fusion might one day be the cheapest source of electrical energy.

26 US Congress, Joint Committee on Atomic Energy, Hearings : Nuclear Explosion Services for Domestic and Foreign Users, 91st Congress, 1st Session (Washington, D.C. : US Government Printing Office, 1969), p. 39, hereinafter cited as Hearings on Nuclear Explosion Services. The charges mentioned do not include safety studies, site preparations, transportation and emplacement.

27 F. Barnaby, Man and the Atom, p. 174.

28 Hearings on Nuclear Explosion Services, p. 41.

29 F. Barnaby, Man and the Atom, p. 174.

so that either a crater or a retarc (a mound of broken rocks) is formed, referred to as an excavation or cratering explosion. Alternatively the explosive can be buried more deeply underground so that the blast is fully contained, referred to as a contained explosion. In the latter type, a cylindrical chimney is formed underground.³⁰

2. Existing Programmes

As early as 1949, Andrei Vyshinsky, the then Soviet Minister of Foreign Affairs, in a statement made at the United Nations, declared that the USSR would develop a nuclear excavation technology. He stated, "... We are raising mountains; we are irrigating deserts; we are cutting through the jungle and the tundra; we are spreading life, happiness, prosperity and welfare in places wherein the human footsteps have not been seen for a thousand years."³¹ The Soviets did some theoretical work on the excavation technique and were known to have proceeded since the mid-1950s with some experiments with powerful chemical explosions.³² Soviet ventures in the field of applications of peaceful nuclear explosions were only revealed and explained in 1969.

It is in the United States that the first concrete steps in exploring the application of nuclear explosives for civil uses have received wide publicity.

In 1956, several physicists at the Lawrence Radiation Laboratory of the University of California, Berkeley, outlined their ideas for the development of peaceful uses for thermonuclear explosives in a letter to the Atomic Energy Commission

30 For a brief discussion of the two types of underground nuclear explosions, see Theo Ginsburg, "The Question of Peaceful Explosions for the Benefit of Non-Nuclear-Weapon States", Conference of Non-Nuclear-Weapon States, Geneva, 1968 (A/CONF.35/Doc. 2, 3 July 1968), pp. 2-3.

31 Quoted by Ginsburg, Ibid., p. 1.

32 Ibid., pp. 5, 8 and 9.

(AEC). In February 1957, a symposium was held at Livermore on the subject and in June the suggestion was formalized into a programme called "Plowshare".³³ The programme's title derived from the biblical phrase "They shall beat their swords into ploughshares; neither shall they learn war any more." Preliminary investigation of a variety of possible applications got under way, and in 1961, the AEC formed its Division of Peaceful Nuclear Explosions.³⁴ The first nuclear "Plowshare" test was the 1962 "Project Gnome" to explore the capture and recovery of thermal energy deposited in a salt dome deep in the earth.³⁵ This test was followed by many others for different applications and a new American vocabulary in this field has been created. For cratering experiments we hear of Sedan, Cabriole, Schooner, Carryall and Chariot. For contained explosions we hear of Gasbuggy, Rulison, Sloop, Bronco and Ketch ... etc.³⁶

For different reasons, as will be explained below, the "Plowshare" programme was gradually oriented towards contained nuclear explosions, especially those aimed at gas stimulation. As a consequence of general financial restraints, the programme's budget was gradually reduced over the years by the Administration. In 1970, the programme's budget was 13.7 million dollars. For 1973, the budget as requested by the Administration was only 7 million dollars.³⁷

In pursuing the goals of peaceful applications of nuclear explosions, the US Atomic Energy Commission (AEC) had sometimes

33 Brooks and Krutilla, op.cit., p. 1.

34 Ibid.

35 Ginsburg, loc.cit., p. 13.

36 For a brief description of those projects and others, see Ibid., pp. 5-15.

37 For a comparison of budget appropriations for "Plowshare", see the hearings which were held every year by the US Congress Joint Committee on Atomic Energy on the budget and programme of the US Atomic Energy Commission (AEC).

worked hand in hand with private industry as in the gas stimulation projects Gasbuggy and Rulison. The financial participation of private industry was considerable in those two projects. Private industry's cost sharing ratio was 40% in the first project and 84% in the second.³⁸ A consortium of US and European firms was also sought to promote peaceful nuclear explosions. An international company was formed in 1968. The company, Nobel-Paso Geonuclear, was a partnership between the El Paso Natural Gas Company of the United States and Nobel Bosch of France and Poudrerie Réunies de Belgique of Belgium. The latter two are experienced manufacturers of chemical explosives. The new company planned to function both as a consultant and as a service firm for possible uses of nuclear explosives.

With the demise of the AEC in 1974 the "Plowshare" programme had come under the control of the Energy Research and Development Administration (ERDA) (which was later absorbed by the Department of Energy established in August 1977). The name "Plowshare" had been dropped in favor of the simple descriptive title, Peaceful Nuclear Explosions. There had been no Test of PNEs by the United States since 1973. The funding for fiscal year 1977 amounted to only a total of \$1 million. The programme is effectively suspended with virtually no appropriations.³⁹ It was found that conventional means for carrying out projects originally contemplated with the use of PNEs would be preferable for economic, environmental and political reasons.

38 See fact sheets on the two projects in US Congress, Joint Committee on Atomic Energy, Hearings : AEC Authorizing Legislation. Fiscal Year 1971 (Part 1), 91st Congress, 2nd Session (Washington, D.C. : US Government Printing Office, 1970), pp. 306-312, hereinafter cited as Hearings on AEC Authorizing Legislation 1971.

39 See US Congress, Senate Committee on Foreign Relations and Its Sub-Committee on Arms Control, Oceans and International Environment, Hearings on Threshold Test Ban and Peaceful Nuclear Explosion Treaties, 94th Congress, 2nd Session, 1977 (Washington, D.C. : US Government Printing Office, 1977), pp. 12 and 134, hereinafter cited as Hearings on Threshold Test Ban.

At the 1964 Geneva Conference on the Peaceful Uses of Atomic Energy, in marked contrast to the 1958 Conference at which a US paper on "Plowshare" received a hostile reception, the US presentation on "Plowshare" elicited keen interest and favourable comment from the delegates of a number of countries including the Soviet Union. A Soviet delegate mentioned an interest in the possible uses of nuclear explosives to accomplish several specific excavation, irrigation and gas stimulation projects in the Soviet Union and suggested the possibility of joint US-Soviet study of these projects.⁴⁰

US-Soviet co-operation in the field of peaceful applications of nuclear explosions only started in 1969, in a meeting which was held in Vienna from 14 to 16 April. It was followed by two other meetings, one in Moscow from 12 to 17 February 1970 and the other in Washington, D.C. from 12 to 23 July 1971.⁴¹ The three meetings have contributed in revealing the progress made by the Soviet Union in this field unknown up till then by United States' experts. US-Soviet co-operation took the form of technical discussions and exchange of information relating to the many aspects of the technology.

Moreover, the parallel participation of the Soviet Union in the five technical panels held under the auspices of the IAEA in Vienna between 1970 and 1976 brought to the world

40 Jacob Koop, "Plowshare and the Nonproliferation Treaty", Orbis, Vol. XII, No. 3, Fall 1968, p. 806. The desirability of US/Soviet co-operation is stressed by the author (p. 814).

41 For a brief account of the three meetings, see respectively US Congress, Joint Committee on Atomic Energy, Hearings : AEC Authorizing Legislation. Fiscal Year 1970 (Part 1), 91st Congress, 1st Session (Washington, D.C. : US Government Printing Office, 1969), pp. 316-322, hereinafter cited as Hearings on AEC Authorizing Legislation 1970; Hearings on AEC Authorizing Legislation 1971 (Part 2), pp. 635-641; and CCD/PV. 536, 7 Sept. 1971, para. 40. On the third meeting, see also International Herald Tribune, 30 July 1971.

scientific community valuable information on the status of Soviet technology.

In general terms, the Soviet programme was found to be exploring the same sorts of questions as that of the United States. Although it was difficult to reach conclusions as to which of the two countries was more advanced than the other, the United States' experts were impressed by the fact that the Soviet Union had carried out certain experiments and even applications without parallel in the American programme.⁴² Most of them were contained explosions, a field towards which the Soviet Union seems to have oriented itself as well. It reported successful use of PNEs in extinguishing a gas well fire, stimulating an oil field and developing an underground storage cavity for gas. In 1972, while the United States was winding up its tests of PNEs, the Soviet Union was reported to have conducted at least 19 tests, seven of which were presumably for peaceful purposes. In 1978, according to preliminary reports, the Soviet Union conducted 27 tests, seven of which might have been for peaceful purposes in view of their location outside the usual weapon testing sites.⁴³

With respect to the other nuclear-weapon States, the United Kingdom, as previously indicated, has no intention to venture into the field. The People's Republic of China has not indicated or revealed any particular interest so far. Only France, in the mid-1960's, started to consider seriously future industrial and scientific applications. This interest emerged during the 1961 - 1966 underground contained nuclear-weapon tests carried out in granite formations in Hoggar, Algeria. In 1969, a new organ called APEX (applications des explosions) was created

42 For example, see Hearings on AEC Authorizing Legislation 1971 (Part 2), pp. 640-641. For a comparison between US and Soviet nuclear explosive civil-application projects, see World Armaments and Disarmament, SIPRI Year Book 1972 (Stockholm : Almqvist and Wiksell, 1972) (Stockholm International Peace Research Institute), p. 467.

43 SIPRI Yearbook 1973, p. 427 and Appendix 13C (pp. 475-476) and SIPRI Yearbook 1979, pp. 651 and 654.

precise projects. It was also orienting itself towards contained underground explosions. During 1976 France started to carry out underground explosions using boreholes. During those experiments, the phenomenology was studied in detail and considerable technological data were obtained. The "commissariat" hoped to undertake actual applications in the near future provided financial support from French private industry would be made available.⁴⁴

This is, in brief, the general status of peaceful nuclear explosions' programmes in the nuclear-weapon States. Some non-nuclear-weapon States are following those programmes closely and are already entertaining the possibility of precise applications on their territories. For example, India submitted to the fourth technical panel on peaceful nuclear explosions held in Vienna in 1975 the results of its studies on its "peaceful" nuclear explosion experiment of 18 May 1974.⁴⁵ Moreover, Egypt submitted to the same panel as well as the 1971 Geneva Conference on the Peaceful Uses of Atomic Energy few ideas on the possible applications of PNEs in Egypt including the development of the "Qattara Depression Project", a scheme designed to channel Mediterranean Sea water into a depression located in the Western Desert of Egypt, about 170 Km to the West of Alexandria, using the difference in levels to produce hydroelectric power.⁴⁶ We shall revert to this project when we examine IAEA procedures in providing PNEs services.

3. Potential Applications

The applications can be divided into four groups according to the kind of services they would provide. They are natural

43 SIPRI Yearbook 1973, p. 427 and Appendix 13C (pp. 475-476) and SIPRI Yearbook 1979, pp. 651 and 654.

44 Peaceful Nuclear Explosions (I), pp. 5-8; (II), pp. 5-6 and (V), p. 6.

45 Ibid. (IV), pp. 421-436.

46 Peaceful Uses of Atomic Energy, Vol. 7, pp. 232-242 and Peaceful Nuclear Explosions (III), pp. 3-11 and (V), pp. 97-123.

resource exploitation, storage or waste disposal, transportation and scientific research.⁴⁷

With regard to natural resource exploitation, most of the applications would use contained explosions. Among the applications tested or envisaged are gas and oil stimulation, recovery of shale oil, copper leaching and geothermal heat recovery. Another application closely connected with resource exploitation is the extinction of gas or oil-well fires.

It is to be noted that of all the potential applications of nuclear explosives for peaceful purposes, contained explosions for the exploitation of natural resources are receiving high priority in research and development. In view of the energy crisis, gas and oil stimulation is gaining in importance. Gas stimulation in particular is of great importance in the light of rising worries about the environment. Moreover, due to the enormous energy to volume ratio of contained explosions, the latter are in most cases the only feasible means of exploiting those resources. In cratering or excavation the technique is merely an alternative. With regard to international legal commitments, fully contained explosions do not raise any problem as far as the application of the Moscow Test-Ban Treaty is concerned. Cratering applications raise problems of the Treaty's interpretation and even its modification.

The applications for storage and waste disposal would use either contained or cratering explosions. Among the applica-

⁴⁷ For a basic understanding of the different applications, see the review paper which was especially prepared for the first panel on peaceful nuclear explosions in Vienna 1970: M.D. Nordyke, "Peaceful Uses of Nuclear Explosions", in Peaceful Nuclear Explosions (I), pp. 49-107. See also A.R.W. Wilson, "A Review of Current Status of Civil Engineering and Mineral Resources Development Applications of Peaceful Nuclear Explosions" (A/CONF.49/P/762: Invited review paper) in Peaceful Uses of Atomic Energy, Vol. 7, pp. 211-231. For Soviet applications, see also "Ideas for Peaceful Nuclear Explosions in USSR", IAEA Bulletin, Vol. 12, No. 2, Apr. 1970, pp. 11-21. For a detailed analysis of specific applications of PNEs, see Appendix 24E to this study.

tions tested or envisaged are underground storage, radioactive waste disposal and water reservoirs including dam construction.

In the field of transportation, all the applications would use cratering explosions or what is sometimes called "geographical engineering". Among the envisaged applications are canals' excavation and harbour construction.

Lastly, scientific applications seek to utilize the nuclear explosive as a source of energy or elementary particles for scientific studies. The main fields of research are neutron physics, heavy element production and seismology.⁴⁸

4. The Feasibility of Peaceful Nuclear Explosions

In assessing the feasibility of peaceful nuclear explosions, several aspects have to be taken into consideration. They are of a technical, environmental, economical, legal and political nature. Without going into the discussion of the first three aspects which all raise considerable problems in need of solutions, it must be pointed out that a paramount consideration in any application is environmental safety; the principle safety hazards being radioactivity, ground motion and air blast.⁴⁹ If these problems were resolved, legal and political restraints would have to be tackled. They deserve special attention in the context of our study of the NPT and especially in conjunction with another international arms-control agreement, i.e., the 1963 Test-Ban Treaty as well as two bilateral agreements be-

48 It is to be noted that nuclear weapon tests and Plowshare explosions from which scientific seismic results have been obtained should not be confused with "Vela tests" in the United States which are nuclear explosions designed to provide basic information on the geological effects of nuclear explosions so as to improve the capability of detecting and identifying unknown events.

49 For a thorough discussion of all the above aspects see IAEA, Nuclear Explosions for Peaceful Purposes, pp. 7-39. These aspects are also discussed with regard to specific applications of PNEs in Appendix 24E to this study as reproduced from the above IAEA document.

tween the United States and the Soviet Union, namely the 1974 Treaty on the limitation of Underground Nuclear Weapon Tests, the so-called Threshold Treaty, and the 1976 Treaty on Underground Nuclear Explosion for Peaceful Purposes, both of which have not yet entered into force but which the Parties have pledged to abide by their spirit until both have been ratified according to the Parties' respective constitutional requirements.

Before turning to the latter agreements, it is to be noted that the peaceful applications of nuclear explosions are restrained by national legal instruments. In the United States, for example, the defunct Atomic Energy Commission (AEC) was limited to providing a nuclear explosion service for research and development including demonstration projects that further AEC programmatic interests. Practical applications were therefore not authorized. But as some applications were thought to be feasible and in compliance with its obligations under the NPT, the United States Administration had engaged a legal process aimed at making peaceful nuclear explosion services available to domestic and foreign users for practical applications.⁵⁰

On the international level, the 1963 Test-Ban Treaty imposes certain limitations. According to paragraph 1 of Article 1, nuclear weapon tests as well as "any other nuclear explosion" (i.e., peaceful nuclear explosion) are prohibited in the "atmosphere, beyond its limits, including outer space; or underwater, including territorial waters or high seas." They are further prohibited "in any other environment if such explosion causes radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control such explosion is conducted."⁵¹ Accordingly, all peaceful nuclear explosions are prohibited except those carried out under-

50 Hearings on Nuclear Explosion Services, pp. 1-6. Willrich observes that the US in concentrating its efforts on gas stimulation is reconciling between protecting its own interests and NPT obligations. Willrich, Non-Proliferation Treaty, p. 147.

51 See Appendix 6.

ground provided that they do not cause radioactive debris beyond the territorial limits of the country or territory where the explosion is performed.⁵²

Furthermore, under the 1974 Threshold Test Ban Treaty, each Party undertakes to prohibit, to prevent, and not to carry out any underground nuclear weapon test having a yield exceeding 150 kilotons at any place under its jurisdiction or control, beginning March 31, 1976. However, the Threshold Treaty stipulates in its Article III that "the provisions of the Treaty do not extend to underground nuclear explosions carried out by the Parties for peaceful purposes" on the understanding that the PNEs will be governed by an agreement negotiated and concluded by the Parties at the earliest possible time. This latter agreement, which was concluded in 1976, impose certain limitations on PNEs conducted not only within areas under the jurisdiction or control of the States Parties to the Treaty but also those conducted by these States within the Territory of other States. The 1976 Treaty also contains a number of provisions which specify what PNEs are not to be carried out by the Parties to the Treaty, and which include specifications of the yields and emplacement depths for individual and group explosions and the emplacement geometries and time intervals between explosions for group explosions. More specifically, Article III of the PNE Treaty reads as follows:

- "1. Each Party, subject to the obligations assumed under this Treaty and other international agreements, reserves the right to:
 - (a) carry out explosions at any place under its jurisdiction or control outside the geographical boundaries of test sites specified under the provisions of the Treaty on the Limitation of Underground Nuclear Weapon Tests; and

⁵² Ulf Ericsson, renowned Swedish scientist, observes that some conceivable peaceful scientific applications in the fields of space science and geophysics are affected by the Moscow Test-Ban Treaty. He further observes that the limited developmental work on excavation applications are confined to countries with large territories. Ericsson, "The Question of Nuclear Explosions for Peaceful Purposes", p. 18.

(b) carry out, participate or assist in carrying out explosions in the territory of another State at the request of such other State.

2. Each Party undertakes to prohibit, to prevent and not to carry out at any place under its jurisdiction or control, and further undertakes not to carry out, participate or assist in carrying out anywhere:

(a) any individual explosion having a yield exceeding 150 kilotons;

(b) any group explosion:

(1) having an aggregate yield exceeding 150 kilotons except in ways that will permit identification of each individual explosion and determination of the yield of each individual explosion in the group in accordance with the provisions of Article IV of and the Protocol to this Treaty;

(2) having an aggregate yield exceeding one and one-half megatons;

(c) any explosion which does not carry out a peaceful application;

(d) any explosion except in compliance with the provisions of the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, the Treaty on the Non-Proliferation of Nuclear Weapons, and other international agreements entered into by that Party.

(3) The question of carrying out any individual explosion having a yield exceeding the yield specified in paragraph 2(a) of this article will be considered by Parties at an appropriate time to be agreed."

Moreover, Articles I, VI.7, VI.8 and VIII of the Protocol to the PNE Treaty and the attached Agreed Statement contain further particularly relevant provisions.

Under the aforementioned provisions, fully contained underground applications such as gas stimulation can take place. With regard to excavation applications in which the explosive is also buried underground, it would be hardly rare if the explosion does not cause long-range fallout beyond national territorial limits, especially as this type of application would

usually entail large engineering projects such as digging canals and constructing harbours. Even a small cratering experiment such as Schooner which was carried out in Nevada on 8 December 1968 using a 35-kiloton nuclear device detonated at a depth of 350 feet released in the atmosphere the highest levels of radioactivity recorded in the western areas of the United States since the Test-Ban Treaty. Radioactivity from the Schooner was even detected by sampling stations in Canada.⁵³ Therefore, excavation applications and even small experiments are in most cases incompatible with the Test-Ban Treaty. An amendment to the Treaty or a new international legal instrument or both would be needed if excavation applications are to be permitted. This question will be further developed in the course of our analysis of Article V of the NPT.

If we turn to the more general question of arms control, there is a school of thought adopting the view that if a choice must be made between peaceful nuclear explosions and meaningful arms control measures, the choice must be the achievement of the latter. This view is based on the argument that the potential of this new technology has not been clearly established, and that in many cases its value remains marginal. Moreover, the world's need for peaceful nuclear explosions is nowhere near as great as the world's need for arms control and disarmament.⁵⁴ For example, it is feared that the advocates of peace-

53 See Barnaby, Man and the Atom, pp. 181-182 and Marvin Kalkstein, International Arrangements and Control for the Peaceful Applications of Nuclear Explosions (Stockholm : Almqvist and Wiksell, 1970) (SIPRI, Stockholm Papers, No. 4), p. 22.

54 Ibid., p. 27. See also David R. Inglis and Carl L. Sandler, "A Special Report on Plowshare. Prospects and Problems : The Nonmilitary uses of Nuclear Explosions", Bulletin of the Atomic Scientists, Vol. XXIII, No. 10, Dec. 1967, pp. 51-52. "Project Cabriolet", a cratering experiment carried out at the beginning of 1968, was delayed because of political considerations relating to the NPT and the Treaty of Tlatelolco negotiations. Willrich, Non-Proliferation Treaty, pp. 295-296 (note 25).

ful nuclear explosions may oppose any attempt to extend the Test-Ban Treaty to cover nuclear testing in all environments and, meanwhile, to press for a less rigid interpretation of the Treaty, in order to permit the more active pursuit of this new technology. Fears are also expressed that the widely accepted use of nuclear explosions for peaceful purposes may not only encourage, as a pretext, the proliferation of nuclear weapons but may also tend to remove, or at least dilute, present inhibitions toward using nuclear weapons in warfare.⁵⁵

Although those views reflect serious concern about the future use of peaceful nuclear explosions, they are not always well-founded. There is no inescapable conflict between this new technology and arms control measures. The NPT, for example, includes several provisions pertaining to peaceful nuclear explosions, which, although they do not meet the satisfaction of a minority of countries, have promised potential benefits from the technology without necessarily endangering the non-proliferation of nuclear weapons. As to the achievement of a comprehensive test-ban treaty, it has been delayed for many years for lack of political will by the two super-Powers which are continuing underground nuclear testing to further improve their weapons systems. Once the will exists to stop nuclear-weapon testing, it will not be difficult to regulate the applications of peaceful nuclear explosions as an exception to a general prohibition. Lastly, the temptation for some non-nuclear-weapon States to produce nuclear explosives for peaceful purposes, with all the complications that may follow, would not necessarily emanate from the wide use of such explosives but rather from the conditions and the modalities worked out to secure

55 For a succinct discussion of such arguments and counter-arguments, see Koop, loc.cit., pp. 806-811. See also Hedley Bull, "On Non-Proliferation", Interplay, Vol. 1, No. 6, Jan. 1968, p. 10. Bull invokes hazards to security that peaceful nuclear explosions are likely to bring in their train. He goes to the extent of proposing the closing down of "Plowshare".

the benefits of the technology. If benefits are secured to all States without discrimination and under favourable conditions, there will be no need for non-nuclear-weapon States to produce their own explosives unless they wish to keep an option as a matter of principle, as is the case with Brazil and India, or as a pretext for concealed military purposes. Moreover, to say that the use of nuclear explosives for peaceful purposes may remove present inhibitions toward using nuclear weapons in warfare is a far-fetched proposition. As noted by one writer, a direct causal relationship of this type has not been noted in other areas of technology.⁵⁶

The most serious problem in relation to the peaceful application of nuclear explosions, however, is public acceptance, especially with regard to large "geographic engineering" projects such as the proposed sea-level Panama canal which could entail the displacement of about 30,000 human beings living in relatively primitive tropical conditions.⁵⁷ But even with regard to much smaller projects public opinion could well become a serious problem. Experience from siting nuclear power reactors has shown that such a problem does exist. If the application of peaceful nuclear explosions becomes a feasible technology on a wide scale, an intensive information process should be initiated on all the questions involved so as to assure the public of its utility as well as of its harmless effects.

5. Future Perspectives

When the United States first brought the question of peaceful applications of nuclear explosions before the ENDC in 1966, in the context of its examination of a non-proliferation treaty,

56 Koop, loc.cit., p. 811.

57 For the political aspects relating to the sea-level Isthmian canal, see James H. Stratton, "Sea-Level Canal : How and Where", Foreign Affairs, Vol. 43, No. 3, Apr. 1965, pp. 513-518.

the prospects appeared to be very promising. At that time the "Plowshare" programme was active in several directions, in contained as well as in cratering experiments. "Plowshare" was receiving generous financial support to cope with its research and development activities. A few years later, by the time the NPT had entered into force and after, the "Plowshare" programme had waned. It was then only concentrating on contained experiments and more specifically on gas stimulation. Its finances, as pointed out earlier, decreased sharply in comparison with the mid-sixties.

On the other hand, the Soviet Union's programme, if judged by existing literature, is energetically pursuing the goal of achieving certain applications, mostly in the field of contained applications. However, some progress is being made in excavation explosions.

Both the United States and the Soviet Union have adopted a more cautious approach in their recent declarations as to future prospects to the extent that the United States appears to be in favor of a comprehensive test ban prohibiting all nuclear explosions in order to exclude the possibility of weapon benefits resulting from peaceful explosions. Cratering applications are rarely mentioned. They seem to have been left dormant, at least for the near future, because of problems mainly relating to radioactivity and international legal and political restraints. Contained applications, on the other hand, seems to hold a sound promise especially for gas and oil stimulation. The question is when commercial exploitation can start. Different estimates have been made. It was hoped that by the end of the 1970's, commercial exploitation would start on a limited scale. This could be followed in the 1980's or by the 1990's by "geographic engineering" projects, if radioactive problems become less hazardous and if international political conditions are more favorable. As estimated by one scientist, "there is high probability that, by the end of this century,

nuclear engineering will have become a standard, though not a routine technique."⁵⁸

The cautious positions of the United States and the Soviet Union, marked by their contentions for the need for more research and development, had their effect on the attitude of a great number of countries. In a 1969 enquiry made by the UN Secretary-General, it was pointed out that among forty countries representing different levels of economic development, the predominant view was that the technology was at an early stage of development and that continued studies were required. However, the expectation was that in the future, nuclear explosions might be used for large-scale engineering projects or recovery of gas, oil and minerals.⁵⁹ It is in this latter field that the non-nuclear-weapon States may hope to gain the first benefits of peaceful nuclear explosions. By then, the application of Article V of the NPT would come into play.

At the 1975 NPT Review Conference, the expectations of Non-Nuclear-Weapon States were still high. As well put by the Chairman of the Conference in a statement at the end of the general debate, very few delegations seemed ready to exclude, completely and finally, some potential benefits to be derived from peaceful nuclear explosions. In its review of Article V, the Conference, inter alia, conceded that the technology of PNEs was still at the stage of development and study and that there are a number of interrelated international legal and other aspects of such explosions which still need to be investigated.

11. The Obligation to Take Appropriate Measures to Ensure the Potential Benefits

Each Party to the Treaty undertakes to take appropriate measures to ensure that potential benefits from any peaceful applications of nuclear explosions will be made available to non-nuclear-weapon States Party to the Treaty.

⁵⁸ Barnaby, Man and the Atom, p. 183.

⁵⁹ UN Doc. A/7678, 29 Sept. 1969, para. 6.

In analysing this obligation, we will first address ourselves to those parties which are in a position to furnish the nuclear explosives needed for the peaceful applications as well as the directly related services attached to them. To distinguish this category of States which is extremely limited in size from the category of "Contributing States" under Article V of the NPT, we shall call them here the "Supplier States". Secondly, at the other end, we will address ourselves to the recipients, i.e., the non-nuclear-weapon States. Lastly, we will deal with the obligation itself : "to take appropriate measures to ensure (the) potential benefits ...".

1. The Supplier States

As can be deduced from the preceding part of this chapter, the United States and the Soviet Union are the only nuclear-weapon States that can be relied upon so far to develop the technology of the peaceful application of nuclear explosions. Although France has started a programme in this field, it is still in a very embryonic stage. If France establishes itself as a potential supplier in this domain, there is nothing in the NPT which would deprive any Party to it from benefiting from France's contribution (in case it continues not to be a Party to the Treaty) provided that due respect of the relevant provisions of the NPT is assured.

The United States in all the phases of NPT negotiations had identified itself as a future supplier of peaceful nuclear explosion services. The Soviets, although defending the merits and benefits of Article V in the course of those negotiations, for the first time publicly acknowledged that they visualise themselves as suppliers of such services on an international basis at the first US/Soviet experts' meeting held in Vienna in April 1969.⁶⁰

⁶⁰ Hearings on Nuclear Explosion Services, pp. 135, 145 and 158.

The United Kingdom, as mentioned before, had no interest in venturing in the field of peaceful nuclear explosions. It is for this reason that it raised an objection to the article which was proposed by Mexico in September 1967. According to the first paragraph of this article, the obligation to provide peaceful nuclear explosion services was incumbent on the nuclear-weapon States Party to the treaty.⁶¹ The UK representative at the ENDC had the following to say :

"The geography and population density of Great Britain make it uncertain whether peaceful nuclear explosives will be an industrially-useful technique in our own islands in the foreseeable future. We have not so far pursued any extensive programme in this field, and are simply not in a position to make the means and facilities for the benefits of peaceful nuclear explosions available to others. We should therefore have difficulty with any language such as that proposed in ... the Mexican amendment ...

... In our view, ... (it) could be interpreted as obliging nuclear-weapon States to develop a peaceful explosives technology and service for the benefit of others even if they had neither the desire nor the resources to develop such a service."⁶²

The objection was well taken and ever since Article V was first submitted in the identical treaty drafts of 18 January 1968, the obligation "to co-operate" or "to take appropriate measures" remained incumbent on each Party. However, the UK representative at the ENDC, while restating the unlikelihood that his country would develop the technology of peaceful explosions, pointed out that the UK will make its contribution under the terms of the article if it should develop the technology.⁶³

Supplier States, however, are not merely the Nuclear-Weapon States able to offer explosive services but also those States

61 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 12 (ENDC/196, 19 Sept. 1967), Article IV-A.

62 ENDC/PV. 337, 10 Oct. 1967, paras. 45-46.

63 ENDC/PV. 358, 23 Jan. 1968, para. 22.

able to offer ancillary PNE project services other than nuclear explosive related services, such as pre-feasibility or feasibility studies including technical, health and safety assessments. This new category of States can be called "Consultant States". The Federal Republic of Germany, for example, is one of the first States to have shown great interest in providing PNE ancillary PNE project services. A German firm had been involved in studies related to the Qattara project in Egypt referred to earlier. Moreover, ancillary services can also be provided by an international Agency such as the IAEA, as will be shown below.

2. The Recipients

Article V stipulates that "potential benefits from any peaceful applications of nuclear explosions will be made available to non-nuclear-weapon States Party to the Treaty ...". Three pertinent questions arise here. What about the nuclear-weapon States at present not in a position to be a supplier State such as the United Kingdom ? Secondly, what about the non-parties to the NPT ? Are they to be denied altogether the potential benefits of the new technology ? And thirdly, which areas of the world will be able to avail themselves of this new technology ?

The non-nuclear-weapon States are specifically mentioned in Article V for the very simple reason that this article was drafted as a compensatory measure for having renounced the production of all nuclear explosive devices. However, there is nothing to prevent a State such as the UK enjoying the status of a beneficiary with regard to the application of Article V. This would even reinforce the regime established for this purpose including the institution of "appropriate international observation" ensuring that the peaceful applications are carried out in accordance with the declared purposes. For this reason any future co-operation between the two super-Powers in the field of actual applications should also come, in our view, within the scope of Article V.

At the ENDC, an amendment proposed by Sweden in February 1968 to omit any reference to non-nuclear-weapon States in Article V of the January 1968 identical treaty drafts so that "the benefits in question should be permitted to be made available to all States",⁶⁴ was disregarded. This happened in spite of the fact that the UK representative welcomed the proposal as having practical significance for his country.⁶⁵ The amendment in fact was part of a set of amendments aimed at keeping open the option to conclude more specifically a comprehensive test-ban treaty and a special agreement on peaceful nuclear explosions without having to amend the NPT at a future date.⁶⁶ As those amendments are closely related to the "appropriate international observation" and the "appropriate international procedures" referred to in Article V, as well as with the channels of supplies, their discussion will take place under the third and fourth parts of this chapter respectively.

If we turn now to the second question of whether Parties to the NPT alone have the right to enjoy the potential benefits of peaceful nuclear explosions, the answer is much less simple than the preceding one and it would affect this time a great number of countries.

It should be recalled that in analysing Article IV of the NPT, we reached the conclusion, not without nuances, that co-operation in contributing to the further development of the applications of nuclear energy for peaceful purposes is not limited to the Parties alone. This being the general principle to be followed, it remains to be found out whether the provisions of Article V are in conformity with this principle or whether they constitute an exception to it.

64 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 32 (ENDC/216, 13 Feb. 1968) and ENDC/PV. 364, 13 Feb. 1968, para. 9.

65 ENDC/PV. 369, 22 Feb. 1968, para. 32.

66 ENDC/PV. 364, 13 Feb. 1968, para. 7.

The difficulty emanates from the fact that Article V at its face value prescribes the availability of the potential benefits of the explosions to non-nuclear-weapon States Party to the NPT. The question has been largely debated in different forums and especially in relation to the establishment within the framework of the IAEA of an international service for peaceful nuclear explosions. The general role of the IAEA will be evoked in the last part of this chapter, but in the meantime we will confine ourselves here to one aspect only, namely the identification of the beneficiaries of such an IAEA service in conjunction with Article V of the NPT. In fact, the idea of establishing a service within the framework of the IAEA has brought new dimensions to the question under discussion.

Three basic positions emerged. To begin with, the United States and the Soviet Union hold to the position that the treaty is quite explicit in that it clearly provides that the non-nuclear-weapon States Parties to the Treaty would benefit from the peaceful applications of nuclear explosions.⁶⁷ The establishment of an international service for such applications within the framework of the IAEA is looked upon by both, as well as by other countries, in the context of the application of Article V of the NPT.⁶⁸ For this reason among others, it was not possible for these countries to support the UN General Assembly resolution adopted at its twenty-third session in 1968 requesting the UN Secretary-General to prepare a report on the establishment of such an international service, a resolution which made no reference at all to Article V of the NPT or to the Treaty itself.⁶⁹ Some countries, such as the Soviet Union

67 UN Doc. A/7678, 29 Sept. 1969, pp. 5 (para. 11), 36 and 39.

68 Ibid., pp. 36 and 39. This point will be further developed under the fourth part of this chapter.

69 GA Res. 2456C (XXIII), 20 Dec. 1968. GAOR, Suppl. No. 18 (A/7218), p. 14.

and the United Kingdom, voted against it while others merely abstained.⁷⁰

The United States, however, is interpreting Article V as not precluding engaging in a bilateral "Plowshare" arrangement with a country which has not signed the NPT "provided the supplying nuclear weapon State Party to the NPT otherwise adheres to its pertinent obligations under the Treaty."⁷¹ (Emphasis added.) This qualified statement is of great significance as it indicates that priority should be given to nuclear-weapon States' obligations towards the Parties to the NPT. At the Senate Committee on Foreign Relations in February 1969 the question was brought up by its Chairman, Senator Fulbright, with respect to "Project Keraudren" for the construction of a harbour in the north western part of Western Australia. Mr. Fulbright wondered if it was not "a little odd" to choose a country that has not signed the NPT (it only signed it on 27 Feb. 1970) while there are other countries that could be favoured. The clarification given by the then Chairman of the US Atomic Energy Commission, Dr. Seaborg, was that the Australian project was not an actual application of peaceful nuclear explosions but was a research and development project which conformed to AEC's own programmatic interests, and replaced an experiment that it would have otherwise done elsewhere.⁷²

A second position, reflecting the views of a large number of countries led by Mexico, upholds that once an international service for peaceful nuclear explosions has been established within the framework of the IAEA, the potential benefits of

70 For the results of the vote in the First Committee, see A/C.1/PV. 1643 (prov.), 17 Dec. 1968, pp. 66-70. Among those who had voted against or abstained, and had made their positions clear on this point, were the United Kingdom, Canada and the UAR. Ibid., pp. 33, 36-37 and 71 respectively.

71 Hearings on Peaceful Nuclear Explosion Services, pp. 75 and 146.

72 Hearings on NPT, 1969, pp. 317 and 328.

such explosions should be made available to the Parties to the NPT as well as to all those who have renounced the acquisition of nuclear weapons. The renunciation should be explicit,⁷³ binding by means of a multilateral agreement,⁷⁴ and not merely by means of a unilateral declaration.⁷⁵

Mexico, in a working document submitted to the Conference of Non-Nuclear-Weapon States on an "International Programme of Nuclear Explosions ...", had preferred the use of the expression "States which have renounced nuclear weapons" to the expression "non-nuclear-weapon States Parties to the NPT". The former expression englobed States which are Parties to the NPT or to the Treaty of Tlatelolco, or which had entered into any other special or regional agreement for the prohibition of nuclear weapons in their respective territories. Mexico had explained, for example, that the Treaty of Tlatelolco had gone even further than the NPT, since its object was to ensure the total absence of nuclear weapons. Mexico had also pointed out that the international contractual instrument should provide for an international control system which was at least as effective as, or more effective than, that provided in the NPT.⁷⁶

This second position was very much in line with the final agenda of the Conference of Non-Nuclear-Weapon States. In contrast with sub-items 14 (a) and (b) of the agenda on peaceful uses of nuclear energy, the provisions of which applied to all States in general, sub-item 14 (d) on peaceful nuclear explos-

73 UN Doc. A/7678, 29 Sept. 1969, p. 24 (Jamaica).

74 A/C.1/PV. 1629 (prov.), 4 Dec. 1968, pp. 23-26 (Pakistan).

75 A/CONF.35/C.2/SR.10, 18 Sept. 1968, p. 109 (Canada).

76 See Mexico, "International Programme of Nuclear Explosions for Peaceful Purposes for the Benefit of States Which Have Renounced Nuclear Weapons", Conference of Non-Nuclear-Weapon States, Geneva, 1968 (A/CONF.35/Doc. 15, 22 Aug. 1968), p. 5 and Ann. I, p. 1, hereinafter cited as "International Programme of Nuclear Explosions". See also UN Doc. A/7678, 29 Sept. 1969, pp. 26-27.

ions mentioned "non-nuclear-weapon States which have renounced the production, acquisition and use of nuclear weapons pursuant to a special international agreement or agreements ...".⁷⁷

A third and last position is upheld by a number of countries led by Brazil and India. They consider that the benefits of peaceful nuclear explosions should be made available to all States members of the IAEA whether they are Parties to the NPT or not. The mere fact of membership in the IAEA, which was established to promote the peaceful uses of nuclear energy, entitles every member to benefit from the peaceful applications of nuclear explosions. Therefore, the establishment of an international service within the framework of the IAEA should be to the benefit of all States members of that organization.⁷⁸

Brazil, which would have benefitted from the position taken by Mexico and others (being a signatory of the Treaty of Tlatelolco), had persisted, however, that an IAEA service should be enjoyed by all members of the organization on a non-discriminatory basis with no conditions attached other than adequate control and supervision by the Agency of the execution of the projects. It referred to several Articles of IAEA Statute including Article XI on Agency projects. It also pointed out that that position would render possible the co-operation between a nuclear and a non-nuclear-weapon State non-Parties to the NPT with the application of appropriate IAEA safeguards.

The Brazilian Government, in consistency with its previously known positions, went to the extent of stating that the benefits from the "service" should not preclude the right to manufacture and detonate - either by its own means or through agreements with other nations whether nuclear or non-nuclear -

77 Final Document of the Conference of Non-Nuclear Weapon States (A/CONF.35/10, 1 Oct. 1968), Ann. III, pp. 1-2.

78 For example, see A/C.1/PV. 1572, 22 May 1968, para. 11 (Zambia) and A/CONF.35/SR.13, 17 Sept. 1968, p. 174 (India).

nuclear explosions for duly substantiated peaceful purposes under adequate control and international supervision. As far as Article V of the NPT is concerned and the modalities of its application such as the "special international agreement" and the "international body", these were matters, in the Brazilian view, which only concerned Parties to the NPT but which should not affect the rights of other members of the IAEA under its Statute.⁷⁹

It is mainly because of this latter argument that Brazil and many other countries including India abstained on a UN General Assembly resolution adopted at its 24th session in 1969. The resolution in their opinion confused the "international service" and the implementation of Article V of the NPT.⁸⁰

The conclusion that we can arrive at is that the provisions of Article V, including the specific modalities of its application, can neither be invoked against the non-parties to the NPT nor can they be resorted to for their benefit. This is a fundamental legal rule.

On the other hand, it would seem quite legitimate to say that third parties can obtain the benefits of peaceful nuclear explosions outside the framework of the NPT, under conditions prescribed by the suppliers and the recipients. It should be recalled, however, that Article V was introduced to compensate those who had renounced the production and acquisition of all nuclear explosive devices. Moreover, the idea of establishing an international service within the framework of the IAEA might not have occurred if it were not for the NPT and the eventual implementation of Article V.

79 See UN Doc. A/7678, 29 Sept. 1969, pp. 9-10; UN Doc. A/7678/Add. 2, 7 Nov. 1969, p. 7; and A/C.1/PV. 1692 (prov.), 18 Nov. 1969, pp. 31-37.

80 GA Resolution 2605B (XXIV), 16 Dec. 1969. GAOR, Suppl. No. 30 (A/7630), p. 20. The resolution was adopted by 80 votes in favour, one against (Kenya) and 37 abstentions. For the discussions of the draft resolution in the First Committee, see A/C.1/PV. 1718 (prov.), 10 Dec. 1969.

Therefore, we tend to agree with the view that all those who have formally renounced, by means of an international legal binding commitment, the production and acquisition of nuclear weapons as well as other nuclear explosive devices, have the right to benefit from peaceful nuclear explosions especially if it is provided through the IAEA. This would encourage a larger number of countries to conform to a non-proliferation regime widely represented. To say that only Parties to the NPT would benefit from peaceful nuclear explosions would, on the contrary, encourage hesitant countries, such as Brazil, to follow one day the path of producing their own nuclear explosives with all the potential dangerous consequences that might accrue.

For those countries who have not renounced nuclear weapons or other nuclear explosive devices, it would be rather difficult to argue in their favour unless the peaceful nuclear explosives are made available for their benefit as part of a sustained non-proliferation policy to dissuade them from producing the explosives by their own means, such as the case might be with a displeased Brazil (technological difficulties for Brazil should not be underestimated). However, if this should take place, parties to the NPT might call their adherence into question. Nuances in treatment could then be established to appease or avoid any misapprehensions. Charges for the nuclear explosives used, for example, can be established on a different criterion than the one under Article V. The main preoccupation of the supplier States, however, should always be to satisfy the needs of those who have adhered to the non-proliferation regime and more particularly the Parties to the NPT.

Some of these considerations were apparently very much in the minds of the Parties to the NPT attending the 1975 NPT Review Conference. In its Final Declaration, the Conference after it had confirmed the provisions of Article V to the benefit of the Parties to the NPT, noted that any potential benefits could also be made available to non-nuclear-weapon

States not party to the Treaty by way of nuclear explosion services provided by nuclear-weapon States, as defined by the Treaty, and conducted under the appropriate international observation and international procedures called for in Article V and in accordance with other applicable international obligations. The conference considered it imperative that access to potential benefits of PNEs not lead to any proliferation of nuclear explosive capability.

With the exception of the preferential supply position and preferential charges for the explosives for non-nuclear-weapon States Parties to the NPT, the IAEA Ad Hoc Advisory Group on PNEs is also in favor that international arrangements in providing PNEs be the same for all non-nuclear-weapon States.

In extending the potential benefits of PNEs to non-parties, the nuclear-weapon States must have come to realize that their previous positions denying PNEs to non-parties would not be helpful in containing the spread of indigenous nuclear capabilities. They hoped that such a shift in their attitude might dissuade certain States from taking an independent course without the blessing and control of an international regime.

Although the declaration of the NPT Review Conference in this respect has generally been well received by non-parties, India was the first to disagree with the view that peaceful nuclear explosions should not be permitted outside the framework of Article V of the NPT. It held that if such a view were accepted, it would mean the establishment of the monopoly of nuclear-weapon States in peaceful nuclear explosions technology for all time to come. The declaration of the NPT Review Conference also appeared not to be an inducement to Pakistan which is reported to be on the verge of exploding in the course of a year or two a nuclear device using enriched uranium produced indigenously by a gas-centrifuge facility that Pakistan has managed to assemble by itself.

Turning now to the last question pertaining to the areas of the world which might avail themselves of the peaceful ap-

plication of nuclear explosions, we certainly do not intend to make here a world-wide survey which is not possible at present and which has not yet been made.

With respect to the large majority of future beneficiaries, it suffices to say that large areas of developing countries sparsely populated may avail themselves of the most efficient and economic development science and technology can afford.⁸¹ Obviously, this would depend primarily on their geological endowment,⁸² and all the necessary prerequisites for a successful and feasible application.

A number of non-nuclear-weapon States, on several occasions and in different forums, have pointed out their future needs and have even sometimes prepared rough estimates of those needs. To cite only a few examples, Bolivia and South Africa, both mining countries, are interested in the further exploitation of their mineral resources;⁸³ Canada in the recovery of petroleum from oil sands in the Athapaska area;⁸⁴ Egypt (formerly UAR) in several applications including increasing water resources, excavating canals in the northern and southern parts of the country and gas stimulation in the north-western-desert;⁸⁵ Madagascar in harbour construction;⁸⁶ and India in copper extraction from several areas in the Indian territory.⁸⁷

81 Keller, Bolliger and Kalff, loc.cit., p. 45.

82 D.R. Inglis, "Civil Uses of Nuclear Explosives" in Barnaby (Ed.), Preventing the Spread of Nuclear Weapons, p. 87.

83 A/CONF.35/C.2/SR.9, 17 Sept. 1968, pp. 98-99 (Bolivia) and p. 102 (South Africa). Bolivia, however, was seriously concerned about safety hazards.

84 A/CONF.35/C.2/SR.10, 18 Sept. 1968, p. 106. However, Canada was waiting for the results of US experiments in this field.

85 A/CONF.35/C.2/SR.12, 20 Sept. 1968, p. 126; Peaceful Uses of Atomic Energy, Vol. 7, pp. 233-242; and the paper presented by Egypt to the third panel on peaceful nuclear explosions in Vienna 1972 (PL/388-3/2).

86 Statement of Director-General of the IAEA, Dr. Eklund, at the 26th session of the UN General Assembly. A/PV.1979 (prov.), 8 Nov. 1971, p. 12.

87 Peaceful Nuclear Explosions (I), pp. 9-10.

Other advanced non-nuclear-weapon States have confined their interest in the field of peaceful nuclear explosions to the study of their phenomenology, their seismological effects, and the study of the arrangements to be made for their use in conjunction with arms control measures. Sweden can be singled out in these domains, especially with respect to arms control, as will be shown below.⁸⁸

3. The Obligation

Under Article V of the 18 January 1968 identical treaty drafts, each party to the treaty would have undertaken "to co-operate" to ensure the potential benefits.⁸⁹

Analysts who have commented on the treaty draft before its final formulation have rightly observed that the obligation "to co-operate" was a vague one. It was pointed out that the obligation need not entail a positive obligation on the part of Nuclear-Weapon States to make available the explosives simply upon request and after a project had been found to be a sound one.⁹⁰

At the 22nd resumed session of the UN General Assembly in 1968 where the treaty draft was finally formulated, the obligation "to co-operate" was criticized by several countries. India, for example, noted that "there is no binding commitment or a positive juridical obligation to provide the assistance since the undertaking is only to co-operate."⁹¹

Upon a suggestion made by Mexico that each party to the NPT "undertakes to adopt the pertinent measures to ensure" the potential benefits,⁹² the final treaty draft now reads : "Each

⁸⁸ Ibid., p. 15.

⁸⁹ See Appendix 3-E.

⁹⁰ See Keller, Bolliger and Kalff, op.cit., p. 41.

⁹¹ A/C.1/PV. 1567 (prov.), 14 May 1968, p. 72. See also A/C.1/PV. 1572, 22 May 1968, para. 81 (Argentina).

⁹² A/C.1/PV. 1569 (prov.), 16 May 1968, p. 31.

Party to the Treaty undertakes to take appropriate measures to ensure ... potential benefits ..."⁹³ (Emphasis added.)

Upon the presentation of the 18 January treaty draft, the United States representative at the ENDC pointed out that Article V "should ... remove any concern by non-nuclear-weapon States for the performance of nuclear explosive services for peaceful purposes."⁹⁴ Similarly, upon the presentation of the final draft of 31 May 1968, the US representative in the First Committee of the General Assembly pointed out that "the new language binds the parties explicitly and emphatically."⁹⁵ Such statements need to be concretized in order to render them more meaningful. But before doing so, attention should be drawn to the following comments on Article V made by the US Atomic Energy Commission (AEC) in a statement delivered at hearings held in 1970 by the Congress Joint Committee on Atomic Energy :

"The language of Article V contains no explicit statement as to what constitutes 'appropriate measures to ensure' that potential benefits will be made available; nor does Article V set forth specific obligations regarding the development of any particular peaceful application of nuclear explosions; nor does it specify any particular level of effort or time scale for such development."⁹⁶

In an earlier statement made by the Chairman of the AEC during the hearings on the NPT in the US Senate Committee on Foreign Relations, Dr. Seaborg elaborated on the obligations the United States would assume under Article V. He said :

"When particular applications are found to be feasible, we plan to make a nuclear-explosion service available on a commercial basis to domestic users and to non-nuclear-weapon parties to the Nonproliferation Treaty. Such a service would include the

93 See Appendix 3-G.

94 ENDC/PV. 357, 18 Jan. 1968, para. 62.

95 A/C.1/PV. 1577 (prov.), 31 May 1968, p. 78.

96 Hearings on AEC Authorizing Legislation 1971 (Part 2), p. 628.

fabrication of the nuclear explosive device, its transportation from the assembly plant to the project site, its emplacement at the prepared site, and its arming and firing. The service would also include appropriate technical reviews of the prepared detonation, such as those relating to health and safety."⁹⁷

The foreign users of the services, on the other hand, would have to take local appropriate measures to facilitate the execution of the project. They would also pay for the service in accordance with rates established for its various elements.⁹⁸

It is inconceivable to have expected Article V to spell out specific obligations regarding the development of any particular application. The technology, as it has been demonstrated in the first part of this chapter, is still in the research and development stage. Nuclear-weapon States at the time of the formulation of the NPT were still exploring all possibilities including natural resource exploitation which seems lately to have received high priority by both the United States and the Soviet Union.

The use of the phrase "potential benefits from any peaceful applications of nuclear explosions" (emphasis added.) indicates, among other things, that the choice of specific applications has not been made due to the fact that the technology itself is not yet feasible.

"Potential benefits" has been interpreted with scepticism to mean "anything from hurricane or weather control, new insights into the dynamics of earthquakes and crater formation, to new findings of soil mechanics, seismology, meteorology, radiobiology and thermodynamics, none of which would necessarily entail the application of a nuclear explosive in a non-nuclear-weapon country."⁹⁹ (Emphasis added.)

97 Report on NPT, 1969, p. 9.

98 Ibid.

99 Keller, Bolliger and Kalff, loc.cit., p. 41.

The flexibility of the term "potential benefits", however, is of great utility as it can not only cover actual applications, which is the ultimate objective, but also all sorts of useful scientific and technological exchange of information related to peaceful nuclear explosives, short of those pertaining to design and fabrication. When Nigeria, for example, suggested that nuclear-weapon States should provide facilities for scientists from non-nuclear-weapon States to collaborate with their scientists working on nuclear explosive devices,¹⁰⁰ the United States expressed its readiness to share with the former scientists information on the technology of applications.¹⁰¹ This willingness had been expressed on many occasions and technical assistance was promised to be made available to non-nuclear-weapon States seeking the study of specific peaceful applications.¹⁰²

However, it was pointed out by both the US State Department and the Atomic Energy Commission that the negotiating record of the NPT made it clear that Article V contemplated the performance of peaceful nuclear explosions services only for developed applications on a commercial basis.¹⁰³ The Treaty therefore did not impose an obligation on the nuclear-weapon States to carry out experiments abroad.¹⁰⁴

The two super-Powers were expected to make sustained and

100 ENDC/PV. 327, 31 Aug. 1967, para. 57. Nigeria introduced an article including a provision to this effect but which was later dropped. DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 18 (ENDC/202, 2 Nov. 1967), Article IV-A (third paragraph).

101 ENDC/PV. 330, 14 Sept. 1967, para. 18. See also ENDC/PV. 337, 10 Oct. 1967, para. 47 (UK).

102 For example, see Hearings on NPT, 1968, p. 104 (AEC Chairman Seaborg).

103 Hearings on NPT, 1969, p. 327 (Letter of the Chairman of the AEC to the Chairman of the US Senate Committee on Foreign Relations).

104 See Ibid., p. 328 (AEC Chairman Seaborg) and Hearings on Military Implications of NPT, p. 86.

vigorous efforts to research and develop all feasible applications of peaceful nuclear explosions. Some worries have even been expressed by leading members of the US Congress Joint Committee on Atomic Energy about the slowness of the "Flowshare" programme which would hamper the United States from living up to its treaty obligations under Article V.¹⁰⁵ Those worries have been met by official assurances of continued and increased involvement in activities associated with working out detailed arrangements.¹⁰⁶ One leading specialist in the field of nuclear energy has even expressed the pertinent view that if nuclear weapons' production were to be halted one day, nuclear-weapon States will still have to maintain and perhaps refine their nuclear explosives expertise.¹⁰⁷

III. The Modalities

The obligation to take appropriate measures to ensure the potential benefits from any peaceful applications of nuclear explosions has to comply with certain rules of conduct. According to the provisions of Article V of the NPT, the potential benefits provided, whether they entail actual applications or not, have to be in accordance with the Treaty and to cause no discrimination. The charges for the explosive devices used should be as low as possible and exclude any charge for research and development. Moreover, the applications should be carried out under appropriate international observation and

105 For example, see Hearings on AEC Authorizing Legislation 1970 (Part 1), p. 309 (Representative Hosmer).

106 US Congress, Joint Committee on Atomic Energy, Hearings : AEC Authorizing Legislation. Fiscal Year 1972 (Part 4), 92nd Congress, 1st Session (Washington, D.C. : US Government Printing Office, 1971), p. 2320.

107 Arnold Kramish, "The Proliferation of Nuclear Weapons" in Cyril E. Black and Richard A. Falk (Eds.), The Future of International Legal Order (Vol. III) : Conflict Management (Princeton, N.J. : Princeton University Press, 1971), p. 238.

through appropriate international procedures. It is under this part, therefore, that we propose the discussion of compatibility with Treaty provisions, non-discrimination, charges for the explosive devices, international observation and international procedures.

1. Compatibility with Treaty Provisions

Article V as it was finally formulated during the 22nd resumed session of the UN General Assembly provided for the first time that the obligation to take appropriate measures to ensure the availability of the potential benefits should be "in accordance with this Treaty". This was done in compliance with a suggestion made by Mexico.¹⁰⁸

The addition of the words "in accordance with this Treaty" should in essence be taken to mean that the undertaking to make available the nuclear explosives or any information relating to them should be in conformity with Articles I and II of the NPT. It means that neither can the explosives be transferred to non-nuclear-weapon States nor can any information pertaining to their design and fabrication be divulged. Although the addition may seem superfluous, it could be considered a useful one in the light of the objections raised by some countries such as Brazil and India to Articles I and II.

2. Non-Discrimination

The principle of non-discrimination has been recognised since the presentation of the first identical treaty drafts of 24 August 1967. It is also included in Article IV of the NPT as previously indicated.

Both the United States and the Soviet Union have tried to dissipate any fears of discrimination. They pointed out that the availability of the benefits either on a bilateral basis

¹⁰⁸ A/C.1/PV. 1569 (prov.), 16 May 1968, p. 31. Mexico suggested the addition of "in conformity with the Treaty".

or through an international body with adequate representation of non-nuclear-weapon States was a guarantee of non-discrimination. Secondly, assurances were given by the US that there would be no scarcity of devices once the peaceful applications became feasible. Non-discrimination would also mean that the charges for the nuclear explosive devices for foreign users would not be greater than those for domestic users. Moreover, assurances were made that the availability of the explosive devices would not be subject to political bargaining or pressure.¹⁰⁹

One of the countries which was particularly sceptical about those assurances was South Africa. For obvious reasons, its representative to the UN explained that their experience with many international bodies showed that discrimination was exercised - on political or other grounds - to deprive certain members of rights to which they regarded themselves as legitimately entitled when originally they became parties.¹¹⁰

Mexico, in its previously mentioned working document to the Conference of Non-Nuclear-Weapon States on an international programme of peaceful nuclear explosions, stressed the non-interference of the States furnishing the services in the internal affairs of the beneficiaries. The services, in its view, should not be based upon or prompted by any political consideration. They should meet "the real needs of the benefitting Member in the opinion of that Member's Government".¹¹¹

109 For example, see ENDC/PV. 369, 22 Feb. 1968, paras. 41-42 (United States) and A/C.1/PV. 1571 (prov.), 20 May 1968, p. 21 (USSR).

110 A/C.1/PV. 1571 (prov.), 20 May 1968, p. 56. Fears of pressures were evoked by Keller, Bolliger and Kalff, loc.cit., pp. 47-48 and Koop, loc.cit., p. 813.

111 Mexico, "International Programme of Nuclear Explosions", Ann. I, p. 3 and Ann. II, Article 30. The "Member" referred to is the member of the proposed programme. Mexico's first proposal for an article on peaceful nuclear explosions in September 1967 provided that assistance in this

Non-discrimination should above all mean that once a service has been established within the IAEA there should be no discrimination among the members of the IAEA who have renounced the production and acquisition of nuclear weapons and other nuclear explosive devices by means of an international legal binding commitment.

3. Charges for explosive devices

Since the United States put forward the general principles upon which the potential benefits of peaceful nuclear explosions might be organized,¹¹² it has maintained the view that the charges for the explosive devices used should be as low as possible and exclude any charge for research and development. This was clearly stated in treaty drafts ever since the presentation of the identical treaty drafts of 24 August 1967.

We mentioned in the first part of this chapter the potential costs of certain nuclear explosive devices. It remains for us to examine the meaning of the lowest possible charge excluding research and development to be set for future beneficiaries.

Concern over this question was expressed in the debate that took place on the NPT. The expression "as low as possible" was found to be a vague one.¹¹³ One country representative also wondered to what extent "(the) price could be made to depart from conformity with the well-known principle of the monopolistic price mechanism."¹¹⁴ Sweden, for example, raised another pertinent question. The creation of the international company

field "shall not be withheld because of extraneous considerations." DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 12 (ENDC/196, 19 Sept. 1967), Article IV-A (para. 2).

112 ENDC/PV. 295, 21 Mar. 1967, para. 76.

113 A/C.1/PV. 1570 (prov.), 17 May 1968, p. 22 (Tanzania).

114 ENDC/PV. 364, 13 Feb. 1968, para. 45 (Ethiopia).

"Nobelpaso Geonuclear", previously referred to in the first part of this chapter, was found to be hardly consistent with the promises that peaceful nuclear explosions' services would be made available on the basis of very low charges as a kind of technical assistance. As the Swedish representative at the ENDC put it, "(t)he profit incentive is evidently not excluded."¹¹⁵

The United States and the Soviet Union have tried to dissipate those worries. The former's representative at the ENDC assured that the mechanism for price setting would not be that of any monopolistic price mechanism.¹¹⁶ The Soviet UN representative was even more outspoken. He interpreted the charges defined in Article V as making it "impossible for any nuclear power in any way to manipulate prices for the purpose of gaining a profit from the carrying out of peaceful explosions in non-nuclear countries."¹¹⁷

This was an occasion for both countries, as well as Canada in particular, to remind the non-nuclear-weapon States of the enormous costs they would incur if they were to venture into producing themselves the nuclear explosives.¹¹⁸ References were made by the Canadian representative at the ENDC to the report of the UN Secretary General on the "Effects on the Possible Use of Nuclear Weapons ..." to demonstrate that the high costs for weapons production mentioned in that report could very well stand for the costs of manufacturing other nuclear explosive devices for peaceful purposes.¹¹⁹

¹¹⁵ ENDC/PV. 373, 5 Mar. 1968, para. 16.

¹¹⁶ ENDC/PV. 369, 22 Feb. 1968, para. 46.

¹¹⁷ A/C.1/PV. 1571 (prov.), 20 May 1968, pp. 21-22.

¹¹⁸ For example, see *Ibid.*, p. 22 (USSR); ENDC/PV. 368, 21 Feb. 1968, paras. 4-12 (Canada); and ENDC/369, 22 Feb. 1968, para. 46 (United States).

¹¹⁹ Effects of the Possible Use of Nuclear Weapons. Paragraphs 44-49 and 52 as well as Annex IV were specifically referred to by the Canadian representative.

Therefore, it was pointed out that by excluding any charge for research and development, the beneficiaries would not only be relieved of all the direct expenses incurred by the nuclear-weapon States in developing the technology, but also of all the investments put into the nuclear weapons programmes which provided the basic technology of nuclear explosives.¹²⁰ To be more specific, the reasons for excluding research and development costs were explained in a US State Department memorandum in the following terms :

"It was felt that it would be unfair ... to recoup from adherents ... the costs which we have already incurred (by far the larger part of which has in fact been incurred for the development of nuclear weapons), of those which we would have incurred irrespective of the treaty, for research and development on nuclear explosive devices."¹²¹

However, it was pointed out that the research and development costs exempted by Article V are those associated with the initial development and design of the particular devices which would become available for commercial purposes but not those which would be necessary in connection with the planning, design and carrying out of a particular application for the benefit of a specific user.¹²²

Both domestic and foreign users of peaceful nuclear explosions will be exempted on an equal footing from research and

120 For example, see ENDC/PV. 359, 25 Jan. 1968, para. 35 (United States). It was estimated that nuclear explosives supplied by the super-Powers may cost as little as 350,000 dollars per megaton compared with a cost of about 30 million dollars per megaton if the receiving State had to bear the total cost of the research and development of the nuclear explosives. Barnaby (Ed.), Preventing the Spread of Nuclear Weapons, p. 241.

121 Hearings on NPT, 1969, p. 312. See also p. 314 (Dr. Seaborg).

122 See Hearings on Nuclear Explosion Services, pp. 66 and 147 and Hearings on Military Implications of NPT, p. 120.

development costs.¹²³ Those costs, however, will in many cases constitute only a small fraction of the total costs of projects contemplated, including costs of engineering and safety surveys, drilling emplacement holes, clean-up operations, transportation, and possibly moving local inhabitants.¹²⁴ Moreover, it was estimated that the interim schedule of charges would be higher than those charges which ultimately would evolve. The high initial charges would decrease if the demand became larger and if procedures and systems for handling commercial projects evolved.¹²⁵

To alleviate further the burden of the high costs of the peaceful applications of nuclear explosions, several remedies were suggested, in particular by Malta and Mexico. First of all, it was suggested that the cost of the nuclear explosive devices should be laid down not by the supplier States but by a "Programme" established to provide the services on the basis of objective criteria and at the lowest possible level. Secondly the supplier States should bear the entire cost of transporting the explosive devices to the territory of the benefiting States; the cost of the engineering work carried out in preparation for the explosion; and of such safety measures as cannot be adopted or implemented by the benefiting States for lack of the necessary technical facilities or knowledge. Thirdly, a special fund based on voluntary contributions should be established to help States which cannot afford to finance projects in their territories.¹²⁶

123 For example, see Hearings on Nuclear Explosion Services, p. 65.

124 Cost estimates for nuclear excavation of a sea-level canal across the Isthmus of Panama showed in 1965 that charges for explosive and firing services would amount to roughly 15 per cent of the total project costs. See Willrich, Non-Proliferation Treaty, p. 140.

125 Hearings on Nuclear Explosion Services, p. 41.

126 See A/C.1/PV. 1575, 28 May 1968, paras. 29-30 (Malta); A/C.1/PV. 1630 (prov.), 5 Dec. 1968, p. 47 (Mexico); and

In the American debate, however, and in confrontation with economically-minded Congressmen, it was stressed that peaceful nuclear explosion services would be performed on the basis of full cost recovery excluding only general costs of research and development on nuclear explosive devices. "All costs of furnishing the explosion service, including among other things, the full cost of all materials, the fabrication of the explosive devices, and the firing of them, would be borne by the foreign user ..."¹²⁷ There was no question of providing the nuclear explosion services free-of-charge.¹²⁸

4. Appropriate International Observation

Ever since the United States proposed the general principles upon which the potential benefits of peaceful nuclear explosions would be organised,¹²⁹ it has maintained the view that the nuclear detonation should be performed under appropriate international observation with the nuclear device remaining under the custody and control of the State which performs the service. In spite of the attention attached to this aspect by several members of the ENDC especially with regard to bilateral arrangements,¹³⁰ no provisions were included to that effect in any of the identical treaty drafts or in the joint draft submitted by the ENDC to the UN General Assembly at its twenty-second resumed session. It was upon a suggestion made by Mexico in the First Committee of the Assembly,¹³¹ that the final provisions of Article V included the phrase "under appropriate international observation".

Mexico, "International Programme of Nuclear Explosions", p. 6, Ann. I (pp. 3-4) and Ann. II (Articles 27, 28, 29, 34 and 35).

127 Hearings on NPT, 1969, p. 314 (Dr. Seaborg).

128 Ibid., p. 311 (Memorandum of US State Department).

129 ENDC/PV. 295, 21 Mar. 1967, para. 73.

130 For example, see ENDC/PV. 368, 21 Feb. 1968, para. 14 (Canada).

131 A/C.1/PV. 1569 (prov.), 16 May 1968, p. 31.

In the context of the study of the role of the IAEA in providing services for the peaceful applications of nuclear explosions, one of the conclusions reached by the Board of Governors of the Agency in its first report on the subject in 1969 was that the international observation called for by Article V was within the Agency's technical competence and clearly fell within the scope of its statutory functions.¹³² Accordingly, the General Conference of IAEA requested the Director-General and the Board to continue their studies in this field.¹³³ Moreover, the UN General Assembly at its twenty-fourth session suggested that the Agency initiate studies on the character of the international observation in which it might engage pursuant to Article V.¹³⁴

A group of experts convened by the Director-General of IAEA met in Vienna from 23 to 27 November 1970 to study the question of international observation. It produced a report¹³⁵ which received preliminary consideration by the Board of IAEA in February 1971.¹³⁶ The Board gave further consideration to the question in the light of comments on the report received from Member States, and on 21 June 1972 finally adopted the guidelines for the observation by the Agency of peaceful nuclear explosions.¹³⁷ The document on guidelines "shall be subject to review and may

132 IAEA Doc. GC (XIII)/410, 31 July 1969, para. 13(b). The report is also annexed to UN Doc. A/7678, 29 Sept. 1969.

133 IAEA Doc. GC (XIII)/RES/258, 29 Sept. 1969.

134 GA Res. 2605 B(XXIV), 16 Dec. 1968. GAOR, 23rd Sess., Suppl. No. 18 (A/7218).

135 The report was issued on 13 Jan. 1971 as a document of the Board of Governors. It was circulated to the members of the Agency for official use only.

136 IAEA, Annual Report, 1 July 1970 - 30 June 1971 (GC(XV)/455), para. 94.

137 IAEA, Annual Report, 1 July 1971 - 30 June 1972 (GC(XVI)/480), para. 89. For the guidelines, see IAEA Doc. INFCIRC/169, 16 Jan. 1973.

be modified by the Board of Governors in the light of experience as peaceful nuclear explosion science, technology and management develop."¹³⁸

It is on the basis of these guidelines and the discussions that had preceded their formulation that the examination of the question of international observation is undertaken in some detail. This entails the definition of the purposes of the observation, the circumstances requiring it, the role of the Agency entrusted with the task of observation as well as that of the supplier and receiving States, the character of observation, and finally the procedures to be followed in carrying out the observation.

(a) The Purposes of Observation

The main purpose of international observation, as it has been recognized by all States, is to make sure that the explosives used remain under the custody and control of the supplier States so that no transfer may occur to non-nuclear-weapon States. The Soviet Union has even stated that the purpose "is to exclude the possibility of using peaceful nuclear explosions as a means for non-nuclear-weapon States to obtain special information necessary for the production of nuclear weapons."¹³⁹

A second purpose, which has also been acknowledged by all States, is to make sure that nuclear explosions are not carried out for other than the declared purposes, i.e. for military ends. It is for this reason that it was suggested by Sweden, as will be shown below, that under a comprehensive test ban on nuclear weapon testing, nuclear explosions carried out in territories of nuclear-weapon States should also be subject to international licensing.

In order to comply with this second purpose, a partial or complete declassification of the design of "Plowshare" devices

¹³⁸ Ibid., para. 34.

¹³⁹ A/C.1/PV. 1577 (prov.), 31 May 1968, pp. 68-70.

has been suggested to improve the assurance that the detonations are not being used to advance the state-of-the-art in nuclear weaponry.¹⁴⁰ This, however, would undermine the first purpose by furnishing information that can be used for the production of nuclear weapons. Other means can be resorted to without divulging any information which could contribute to the production of these weapons. Information can be given about, for example, how much earth the explosive can move, how much rock it can crush, how much heat it produces or how large a cavity it makes. The specification of the characteristic effects makes it likely that the explosive device has already been tested. However, information relevant to weapons effects, for example, might be revealed during the process of measuring and checking to see that the effects of the application were those intended. This could be controlled by keeping the instrumentation used to measure effects to the minimum necessary for a successful application.¹⁴¹

A third purpose not related to arms control is environment protection. As mentioned earlier, this is a major concern in any application. Many countries have attached primordial importance to safety measures.¹⁴²

However, the group of experts which was convened to study the question of international observation agreed that IAEA's

140 Koop, loc.cit., p. 815.

141 See Kalkstein, op.cit., pp. 29-32. Dr. Ulf Ericsson of Sweden suggests that international observational control of co-operation in the study and use of peaceful nuclear explosion effects should be able to prevent misuses or apprehensions about such misuses. Ericsson, "The Question of Nuclear Explosions for Peaceful Purposes", p. 25. Dr. Ericsson, however, does not seem to underestimate the problems involved in preventing the misuse of the peaceful applications for purposes other than those declared.

142 For example, see A/C.1/PV. 1628 (prov.), 3 Dec. 1968, pp. 42-45 (Bolivia); UN Doc. A/7678, 29 Sept. 1969, p. 12 (Canada); and UN Doc. A/7678/Add. 1, 30 Oct. 1969, p. 4 (Philippines).

role in health and safety aspects of peaceful nuclear explosions' operations should be the subject of thorough study by the Agency.¹⁴³ Therefore, the "Guidelines" for the international observation by the Agency do not address themselves to this issue which has been taken care of by the competent organs of the IAEA in conjunction with the international observation carried out in compliance with the two other purposes.

In fact, the very first paragraph of the IAEA document on guidelines states that the basic purpose of international observation is "to verify that, in the course of conducting a peaceful nuclear explosion project in a non-nuclear-weapon State, the intent and letter of Article I and II of the ... (NPT) or of analogous provisions in other international agreements are not violated."¹⁴⁴ (Emphasis added.) The verification would also make sure, as stated in paragraph 8 (d) of the same document, "(t)hat the nuclear explosion or explosions are carried out in accordance with the declared purpose."¹⁴⁵ The remaining sub-paragraphs of paragraph 8 as well as paragraphs 9 and 10 address themselves to the purpose and scope of observation. Paragraph 9(d), for example, deals with necessary information relating to carrying out the declared purpose of the projects.¹⁴⁶

(b) The Circumstances Requiring the Observation

Due to the fact that no provisions were made for international observation until the final draft of the NPT was formulated, some countries, during the NPT negotiations, were sceptical and even very much against providing nuclear explosion services through bilateral agreements.¹⁴⁷ The United States has confirmed, however, that appropriate international observation shall be provided whether peaceful nuclear explosions

¹⁴³ See note 135 above.

¹⁴⁴ IAEA Doc. INFCIRC/169, 16 Jan. 1973, p. 2.

¹⁴⁵ Ibid., p. 4.

¹⁴⁶ Ibid., pp. 4-5.

¹⁴⁷ For example, see ENDC/PV. 364, 13 Feb. 1968, para. 9 and ENDC/PV. 373, 5 Mar. 1968, paras. 13-15 (Sweden).

services are made available through an international body or bilaterally.¹⁴⁸ Yet the use of the word "appropriate", as observed by one writer, may allow in each case some differentiation in the treatment accorded depending on the channel.¹⁴⁹ A differentiation would be inevitable, however, in working out detailed arrangements in each project taking into account both technological developments and the particular conditions pertaining to each case. This fact has been acknowledged by the group of experts entrusted with the study of the question.¹⁵⁰

Paragraph 2 of the IAEA document on "Guidelines" states that :

"Observation is required where peaceful nuclear explosion services are carried out either :

(a) Through the Agency; or

(b) Pursuant to bilateral agreements, in accordance with Article V of NPT or with provisions in other international agreements, calling for such observation."¹⁵¹

It is commendable to have given consideration to other international agreements such as the Treaty of Tlatelolco. This Treaty not only provides in its Articles 12 and 18 (paragraphs 2 and 3) for IAEA observation and pertinent information relating to this task,¹⁵² but is also connected with the Agency through the 1972 agreement of co-operation between the latter and the Agency for the Prohibition of Nuclear Weapons in Latin America (OPANAL).¹⁵³

148 Hearings on NPT, 1968, p. 103 (Dr. Seaborg).

149 Willrich, Non-Proliferation Treaty, p. 143.

150 See note 135 above.

151 IAEA Doc. INFCIRC/169, 16 Jan. 1973, p. 2.

152 See Appendix 6. Argentina, for example, would have been in favour of a formula in the NPT similar to that of Article 18 of the Treaty of Tlatelolco. A/C.1/PV. 1572, 22 May 1968, para. 80.

153 IAEA Doc. INFCIRC/25/Add. 4, 15 Dec. 1972.

Another important point, relating to the circumstances, concerns the "lieu" of application. The Swedish amendments previously referred to, which suggested the omission of any reference to non-nuclear-weapon States in Article V, were in fact aimed at harmonising the NPT with a future comprehensive test-ban treaty and a special agreement on peaceful nuclear explosions whereby any peaceful application of nuclear explosions, wherever it takes place, even if it is carried out by a nuclear-weapon State on its own territory, will be subject not only to international control but also to international licensing by an international organ.¹⁵⁴ The amendments were not accepted by the two co-authors for reasons which will be evoked later. Apparently, then, international observation would be related to projects executed in non-nuclear-weapon States only. This was confirmed in the hearings held, for example, by the US Congress Joint Committee on Atomic Energy on peaceful nuclear explosions¹⁵⁵ as well as by the IAEA document on "Guidelines" in its first paragraph referred to above.

Unfortunately, the 1976 bilateral Treaty concluded between the United States and the Soviet Union on underground peaceful nuclear explosions and the Protocol attached to it while providing the establishment of bilateral procedures for on-site access by observers with technical equipment and an extensive data exchange, do not provide for international observation for PNEs carried out by them in their respective territories. According to Article VII of the Treaty, however, each Party undertakes not to carry out, participate or assist in the carrying out of any explosions in the territory of another State unless that State agrees to the implementation in its territory of the international observation contemplated by Article V of the NPT.

154 See DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 32 (ENDC/216, 13 Feb. 1968); ENDC/PV. 364, 13 Feb. 1968, para. 9; and ENDC/PV. 373, 5 Mar. 1968, paras. 13-15.

155 Hearings on Nuclear Explosion Services, p. 75.

It is hoped, however, that in future arrangements, projects carried out in the territories of nuclear-weapon States would be subject to international observation. This would be very much in line with the principle of non-discrimination and a guarantee that projects executed are carried out in accordance with their declared peaceful purposes under a comprehensive test-ban treaty. The pledge made by the United States and the United Kingdom to accept voluntarily IAEA safeguards on their peaceful nuclear activities, which will be evoked later in connexion with Article III of the NPT, should be carried further and even strengthened by means of a legal commitment with regard to the peaceful applications of nuclear explosions.

(c) The Role of the Agency and Other States

The question of entrusting the IAEA with the task of observation, whether or not in conformity with Article V of the NPT, has raised no controversy. Likewise, the question of keeping the explosive under the custody and control of the nuclear-weapon States was never questioned, especially since under Articles I and II of the NPT no transfer of the explosives can take place even to an international organisation as previously noted in Chapter 5. On the other hand, the non-nuclear-weapon States benefiting from the services will have to contribute to the successful outcome of the observation operation. Therefore, an efficient and successful international observation cannot be achieved without the co-operation of the three parties.

The IAEA, in carrying out its function, would not have been able to rely upon Article III of the NPT on safeguards. Such reliance would entail the dissemination of information concerning design and manufacture of the explosive devices such as the quantities of the special fissionable materials contained in them. This would be contrary to the objectives of Articles I and II of the NPT.¹⁵⁶ Therefore, special guidelines were

¹⁵⁶ See Hearings on NPT, 1968, p. 114 (AEC answers to questions prepared by the Joint Committee on Atomic Energy staff).

worked out and included in the IAEA document which in its paragraph 3 provided for an observation agreement similar to the safeguard agreement provided for in paragraph 4 of Article III of the NPT. The first sentence of paragraph 3 reads as follows :

"Observation shall be undertaken pursuant to a specific agreement for observation ... to be concluded in accordance with applicable provisions of this document between the Agency and the State or States concerned."¹⁵⁷

Paragraphs 4 to 7 of the IAEA document deal with the obligations of the Agency and the other parties to the observation agreements. The Agency's obligations include the arrangement to provide the minimum number of observers necessary to maintain surveillance; the request of information and the carrying out only of those activities needed to perform its task; non-hindrance to the conduct of the operations; the provision of information on any contravention to the NPT, analogous agreements or observation agreements; and the request for appropriate action to be taken in this respect.¹⁵⁸

Other parties' obligations include protection against the direct or indirect disclosure of nuclear explosive design information, thus providing the opportunity for observation and co-operation with the Agency. The supplier nuclear-weapon State shall take appropriate steps to ensure that persons other than its authorized nationals acting on its behalf do not have access to the design information contained in any documents or materials transported to the non-nuclear-weapon State.¹⁵⁹ The

157 IAEA Doc. INFCIRC/169, 16 Jan. 1973, p. 2.

158 Ibid., paragraph 4, p. 3.

159 See Ibid., paragraphs 5-7, p. 3. Dr. Ericsson of Sweden observes that operations should not be let out of State control, even if as it is expected private engineering enterprises provide their services for many of the tasks involved in peaceful domestic or international uses of nuclear explosions. Ericsson, "The Question of Nuclear Explosions for Peaceful Purposes", pp. 10-11.

custody and control of the nuclear explosives will remain at all times with the supplier nuclear-weapon State.¹⁶⁰

(d) The Character of Observation

The character of observation is consequently affected by the preceding aspects. The IAEA document on "Guidelines", in its paragraphs 11 to 15, addresses itself to this side of international observation. For example, observation shall begin when the nuclear explosive device or devices leave either the territory, or the means of transport which is under the jurisdiction and control of the supplier nuclear-weapon State, whichever occurs later. Surveillance shall be continued on a 24-hour per day basis. Continuous visual observation is desirable unless other means are at least as effective as the former.¹⁶¹

(e) Procedures

The IAEA document on "Guidelines" includes several provisions pertaining to the designation and visits of IAEA observers as well as to their reports. They appear to have followed to a great extent procedures established by the IAEA in applying safeguards on other peaceful nuclear activities. It suffices to refer here simply to paragraphs 16 to 18 and 20 to 31 of the IAEA document.¹⁶²

Before concluding, it is to be noted that the observation function need not be performed where the opportunity for observation is provided in accordance with the observation agreement, and no fault can be attributed to the supplier and the

160 For measures contemplated by the US Government to assure US physical custody of a "Plowshare" device, see Hearings on Nuclear Explosion Services, p. 97. The measures could include a guard force, mechanical or electronic protective systems, the use of rapid means of transportation to reduce time of exposure, etc.

161 IAEA Doc. INFCIRC/169, 16 Jan. 1973, paras. 11-15, pp. 566.

162 Ibid., pp. 6-8.

benefiting State party to the agreement. Moreover, in emergency projects such as the extinction of gas or oil-well fires, where delays cannot be observed in concluding the observation agreements, special measures may be taken consistent with the guidelines embodied in the IAEA document provided that a specific approval of the IAEA Board of Governors is accorded.¹⁶³

Finally, the Ad Hoc Advisory Group on PNEs recommended in its 1977 report that these "guidelines" should be kept under review to ensure their continued adequacy, particularly in relation to the acquisition of information relevant to the development of any nuclear weapon or the effects of any such weapon.

5. Appropriate International Procedures

Since the presentation of the identical treaty drafts of 24 August 1967, all treaty drafts maintained the provision that the potential benefits from any peaceful applications of nuclear explosions will be made available through appropriate international procedures.

The United States, in putting forward in March 1967 the general principles upon which the potential benefits might be organised, had indicated that the conditions and procedures for international collaboration in accomplishing peaceful nuclear explosive projects would be developed in full consultation with the non-nuclear-weapon States. Full consultation should also take place, as indicated by the United States in those principles, among nuclear and non-nuclear Parties to the Test-Ban Treaty about any amendment of the Treaty required in order to carry out feasible projects.¹⁶⁴ As the United States representative at the ENDC later put it :

"These 'appropriate international procedures', once established and whatever the particular form they might take, would apply to both bilateral and multilateral projects. If, under a comprehensive test-

163 See *Ibid.*, para. 7, p. 3 and paras. 3 and 19, pp. 2 and 7 respectively.

164 ENDC/PV. 295, 21 Mar. 1967, paras. 77-78.

ban treaty, international approval were needed for the conduct of a nuclear explosion for peaceful purposes, such approval would constitute an 'appropriate international procedure' applicable to services conducted bilaterally or through an appropriate international body."¹⁶⁵

(a) General Ideas and the Role of the IAEA

In the first place, certain basic elements can be deduced from previous discussions of the NPT as well as from domestic experience in the supplier States and more precisely the United States.

Procedures envisaged should pertain to matters such as health and safety not covered, as mentioned above, by the IAEA document on international observation. They should also pertain to economic feasibility of projects proposed and priority among them.¹⁶⁶

International procedures for health and safety would not only establish public confidence in peaceful nuclear explosions but also establish an impartial set of standards applicable to all States. Certain general criteria could also be established to measure the economic feasibility of proposed projects without overlooking the special needs of States and the circumstances surrounding each project. Such criteria would guard against discrimination as well as against pressures to assist projects of doubtful value.¹⁶⁷

International procedures, as clearly stated by the United States, will be applicable to services conducted bilaterally, multilaterally or through an appropriate international body. As to projects carried out unilaterally, i.e., those carried out by the nuclear-weapon States in their own territories, there seems to be no urge to decide about them except for the bilateral procedures worked out in the 1976 US/Soviet PNE Treaty. The Swedish amendments previously referred to and which were

¹⁶⁵ ENDC/PV. 369, 22 Feb. 1968, para. 44.

¹⁶⁶ For example, see ENDC/PV. 295, 21 Mar. 1967, para. 74 (US).

¹⁶⁷ See Willrich, Non-Proliferation Treaty, pp. 143-146.

aiming at making any peaceful application of nuclear explosions under a comprehensive test-ban subject to international licensing by an international body would have virtually meant the prohibition of any unilateral decisions in this domain.

Both the United States and the Soviet Union rejected the Swedish amendments on the basis that Article V did not pose an impediment to a comprehensive test-ban Treaty.¹⁶⁸ As the Soviet representative at the ENDC explained, if, in connexion with such a treaty, it became necessary to make certain additions to, or changes in, the international procedures for carrying out the explosions provided by Article V, this problem would be carefully considered and duly taken into account at the proper time.¹⁶⁹ However, the Swedish representative at the ENDC reminded both countries that procedures for amending the NPT to make it consistent with a future comprehensive test-ban would be of a very cumbersome nature, especially if the veto right of a nuclear-weapon State is exercised to reject the amendment.¹⁷⁰

The question of bilateral arrangements and international licensing will be further developed in the last part of this chapter relating to the channels of supply. It suffices to say here that the application of international procedures to unilateral projects could raise formidable problems no less than those relating to international observation on such projects. Both would in fact impose unprecedented limitations on the freedom of action of the nuclear-weapon States in the field of peaceful uses of nuclear energy.

Another basic element is the full participation of non-nuclear-weapon States in developing the appropriate internation-

168 ENDC/PV. 369, 22 Feb. 1968, paras. 43-44 (US) and ENDC/PV. 370, 27 Feb. 1968, paras. 52-53 (USSR).

169 *Ibid.*, para. 53.

170 ENDC/PV. 373, 5 Mar. 1973, para. 11.

al procedures.¹⁷¹ There is consensus that this participation should take place within the framework of the IAEA. Article XI of the IAEA Statute on agency projects is considered to be a good basis for working out the appropriate international procedures.

In fact, the third IAEA technical panel on PNEs, which met in 1972, recommended that the Agency should develop detailed procedures for responding to requests from Member States for assistance in obtaining PNE services.

Accordingly, the IAEA convened a Group of Experts in April 1974 with representation both from supplier States and non-nuclear-weapon States to advise on these procedures. The group decided to concentrate on appropriate procedures for the early stages of a possible PNE project including the guidelines for requesting States and Agency procedures to meet the requests before the conclusion of pertinent agreements between the Agency, the requesting States and the supplier States. More specifically, early stages of a project would entail inter alia preliminary review, pre-feasibility and feasibility studies, technical screening and the provision upon request of individual reviews of technical studies and of health and safety assessments. This approach was approved by the IAEA Board of Governors in September 1974. The IAEA has also established at the end of 1974 a Register of supplier and consultant States to enable interested Member States of the IAEA to be aware of the kind of services that could be provided.¹⁷²

171 In a Romanian working paper containing amendments to the identical treaty drafts of 24 August 1967, it was suggested that the words "accepted by all States signatories to the Treaty" should be added after the words "through appropriate international procedures" in the ninth preambular paragraph. DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 14 (ENDC/199, 19 Oct. 1967). Romania did not pursue its amendment further after the presentation of the second identical treaty drafts of 18 January 1968 which included for the first time an article on peaceful nuclear explosions.

172 See Review Conference of the Parties to the NPT, IAEA Activities Under Article V of NPT. Analytical and Technical Report (NPT/CONF/12, 17 Feb. 1975), pp. 8-9 and 20-27; IAEA, Nuclear Explosions for Peaceful Purposes, p. 6 and IAEA

The above procedures were reviewed by the Ad Hoc Advisory Group on Nuclear Explosions for Peaceful Purposes. In its report of 1977, it expressed the view that the adequacy of the present procedures will need to be reassessed in the light of any new legal instruments which are drawn up. In the meantime the Group accepts that the procedures already established by the IAEA are appropriate to its purposes. As to appropriate procedures for later stages of a possible PNE project, i.e., project definition, project execution, post-project evaluation and project termination phases, which still have to be worked out, the IAEA has suggested it could contribute by way of observation, monitoring and reporting.

The Director General of IAEA has informed the Ad Hoc Advisory Group that the procedures worked out by the IAEA have provided adequate guidance in the one instance in which their application has been required to date. In response to an invitation extended by the Egyptian Ministry of Electricity and Energy, an Agency fact-finding mission visited the Qattara Depression site, earlier referred to in this Chapter, in April/May 1976 in order to obtain first-hand information about various technical aspects of the project, including the possible use of PNE techniques in canal excavations, which was the object of a feasibility study financed by a West German firm. The IAEA fact-finding mission felt that it was able to complete the preliminary screening according to the procedures worked out by the Agency in 1974.¹⁷³

Doc. GOV/1691. The latter document, which contains the procedures adopted by the IAEA, is reproduced in its entirety in Appendix 24D to this study.

- 173 Nuclear Explosions for Peaceful Purposes, p. 6 and Preparatory Committee for the Second Review Conference of the Parties to the NPT, IAEA Activities Under Article V of NPT (NPT/CONF.II/PC.II/9, 25 July 1979), pp. 6-7. In 1971 the Department of Mines and Power of Madagascar requested information on the possible use of PNEs for blowing up a rock obstruction in a harbour construction project. At its request the Agency contacted France, UK, US and USSR all of which expressed their willingness to supply the services of experts for an appraisal of the feasibility of using PNE for this purpose. This was conveyed to the Madagascar authorities but there was no further developments. See Doc. NPT/CONF/12, 17 Feb. 1975, pp.9-10.

(b) Comprehensive Test Ban and Peaceful Nuclear Explosions

Arrangements to be made for making available peaceful nuclear explosions within the framework of a comprehensive test ban and in conjunction with Article V of the NPT would constitute international procedures even if they do not require international approval. This would be the case with bilateral arrangements whereby the IAEA plays the role of an intermediary.

In the first part of this chapter we reached the conclusion that under the Test-Ban Treaty only underground peaceful nuclear explosions that do not cause radioactive fallout outside the territorial limits of the State under whose jurisdiction or control such explosions are conducted would be permitted. In the state of the art as it stands at present this would virtually mean only fully contained peaceful nuclear explosions.

With regard to the Threshold Test Ban Treaty of 1974 and the PNE Treaty of 1976 the same applies provided the prescribed ceilings on yields as well as other conditions, referred to earlier, are strictly observed.

Efforts are still being deployed in different forums of negotiations to reach an agreement on a comprehensive test ban. The question arises, how are we to accommodate peaceful nuclear explosions under such a comprehensive test ban?

In the first place, the close link between peaceful nuclear explosions and a comprehensive test ban has been well established. Upon Sweden's initiative,¹⁷⁴ the Conference of Non-Nuclear-Weapon States adopted a resolution endorsing such a link and underlining the urgency of a universal and comprehensive solution of the problem compatible with a comprehensive test-ban treaty.¹⁷⁵ In fact the resolution was endorsing the

174 See A/CONF.35/C.2/SR.10, 18 Sept. 1968, pp. 109-112 and SR.12, 20 Sept. 1968, p. 130; A/CONF.35/C.2/L.10, 19 Sept. 1968; L.10/Rev. 1, 24 Sept. 1968; and Rev. 1/Add. 1, 24 Sept. 1968 (with Nigeria as a co-sponsor).

175 Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution L, pp. 18-19. Very few countries abstained on the resolution for

opinion of the eight non-aligned members of the ENDC in their August 1968 joint memorandum on a comprehensive test-ban treaty.¹⁷⁶ However, this link should not be a reason to delay the peaceful application of contained nuclear explosions for the benefit of non-nuclear-weapon States, once it proves to be feasible. It would be compatible with the Partial Test-Ban Treaty.¹⁷⁷

Secondly, the problem is how to establish such a link. There are several alternatives which have been suggested. They are :

(i) The conclusion of a comprehensive test-ban treaty prohibiting in principle all nuclear explosions and the working out of a separate international instrument for allowing peaceful nuclear explosions as exceptions and under specific rules as to international management and control. This alternative was favoured, for example, by Sweden (1967-68) and India¹⁷⁸

different reasons. Italy, for example, had abstained because the close link might delay the conclusion of an agreement on peaceful nuclear explosions (A/CONF.35/C.2/SR.17, 25 Sept. 1968, p. 179). Moreover, Australia abstained because of the lack of any reference to bilateral arrangements in the text of the resolution which were provided for in Article V of the NPT (Ibid., p. 180).

176 DCOR, Suppl. for 1967 and 1968, Doc. DC/231, Ann. I, Sec. 10 (ENDC/235, 26 Aug. 1968).

177 Italy expressed the view that the regulation of underground explosions for peaceful purposes under an acceptable form of control would help to facilitate an overall prohibition of nuclear-weapon tests. Ibid., Sec. 9 (ENDC/234, 23 Aug. 1968); A/C.1/PV. 1606 (prov.), 12 Nov. 1968, pp. 32-35; and A/C.1/PV. 1635 (prov.), 10 Dec. 1968, pp. 17-20. Burma also pointed out that international observation for peaceful nuclear explosions could conceivably be acceptable to the two super-Powers to perform the functions of on-site inspection in relation to a comprehensive test ban. A/C.1/PV. 1697 (prov.), 24 Nov. 1969, pp. 38-40.

178 For example, see ENDC/PV. 302, 6 June 1967, para. 16 (Sweden) and A/CONF.35/SR.13, 12 Sept. 1968, p. 174 (India). The initial Swedish position has undergone considerable changes as is shown below.

and was reflected in paragraph (d) of the preamble of the resolution adopted at the Conference of Non-Nuclear-Weapon States.¹⁷⁹

(ii) The conclusion of a comprehensive test-ban treaty which should include at least an explicit exemption for peaceful nuclear explosions. This was the view expressed by several States such as the Netherlands and Australia.¹⁸⁰

(iii) The conclusion of an underground test-ban treaty which would explicitly exempt peaceful nuclear explosions from its provisions, provided they were carried out in conformity with an international agreement negotiated separately. This was the position in April 1969 of Sweden which had submitted to the ENDC a working paper on possible provisions of an underground test-ban treaty.¹⁸¹

(iv) The conclusion of an underground test-ban treaty which would explicitly exempt peaceful nuclear explosions from its provisions, provided they took place in conformity with a separate protocol annexed to the treaty. This was a proposal also

179 It is to be noticed that 35 countries abstained in the separate vote on paragraph (d) in Committee Two of the Conference. A/CONF.35/C.2/SR.16, 25 Sept. 1968, p. 173.

180 A/C.1/PV. 1699 (prov.), 25 Nov. 1969, p. 27 (Netherlands) and A/C.1/PV. 1704 (prov.), 28 Nov. 1969, p. 33 (Australia). The Netherlands, however, being sceptical about a watertight guarantee against the misuse of peaceful nuclear explosions for the development of weapons, later expressed the view that the only alternative would be to agree on a nuclear test ban without exceptions "if it were decided that the economic benefits of peaceful explosions were so doubtful that it would be better to forgo them completely rather than run the risk of creating a loophole for the continuation of the nuclear arms race." CCD/PV. 512, 29 Apr. 1971, para. 47.

181 DCOR, Suppl. for 1969, Doc. DC/232, Ann. C, Sec. 6 (ENDC/242, 1 Apr. 1969), Article I (paragraph 3) and ENDC/PV. 399, 1 Apr. 1969, para. 40. India was of the view that the international agreement on underground peaceful nuclear explosions should be negotiated simultaneously with an underground test-ban treaty. CCD/PV. 504, 25 Mar. 1971, para. 110.

made by Sweden in a second version of its previous working paper and which was submitted to the CCD in September 1971.¹⁸²

(v) The conclusion of a treaty on the complete and general prohibition of nuclear weapon tests which would provide, inter alia, that in the case of non-nuclear-weapon States, peaceful nuclear explosions would be conducted in conformity with the provisions of Article V of the NPT, while in the case of nuclear-weapon States the procedure for conducting them would be established by a special agreement which could be concluded as speedily as possible. The Soviet Union tabled a draft of such a treaty at the CCD in 1977.

(vi) The conclusion of a treaty banning nuclear weapon test in all environments. The treaty would leave room for special arrangements for the conduct of peaceful nuclear explosions under international supervision, the details of which could be worked out later in protocols to the treaty. This was another proposal made by Sweden at the CCD in 1977.¹⁸³

In 1978, at the CCD, it was reported on behalf of the delegations of the UK, USA and USSR that in the tripartite negotiations on a treaty prohibiting nuclear weapon tests the three negotiating parties were in agreement that the treaty should establish a ban on any nuclear weapon test explosion in any environment and that the provisions of a protocol, which would be an integral part of the treaty, would apply to nuclear explosions for peaceful purposes. The Final Document of the Tenth Special Session of the UN General Assembly devoted to disarmament, made reference to such a treaty and pointed out that it should be concluded.¹⁸⁴

182 CCD/PV. 524, 27 July 1971, paras. 8 and 13 and CCD/348, 2 Sept. 1971, Article II.

183 For the Soviet and Swedish draft treaties see CCD/523 and CCD/526 respectively in Documents on Disarmament 1977, pp. 80-84 and 112-115.

184 See Preparatory Committee for the Second Review Conference of the Parties of the NPT, IAEA Activities Under Article V of NPT (NPT/CONF.II/PC.II/9, 25 July 1979), p. 2 and Appendix 22 to this study, para. 51.

Other possibilities can certainly be thought of. The problem can easily be solved, however, once the political will of the two super-Powers to halt all nuclear-weapon testing exists and once the peaceful application of nuclear explosions finally proves a feasible technology.

IV. Channels of Supply

The remaining parts of Article V of the NPT relate to the channels through which potential benefits of peaceful nuclear explosions will be made available. According to the Article, such benefits may be obtained through an appropriate international body and pursuant to bilateral agreements. In principle, there should also be no obstacle to making available such benefits through multilateral arrangements whereby several countries agree with the supplier State or States to carry out projects of common interest to the recipients or to both. However, we will confine ourselves to the two basic channels specifically mentioned in Article V.

1. Bilateral Agreements

Bilateral arrangements as channels of supply of peaceful nuclear explosions did not figure in the preambular paragraph of the identical treaty drafts of 24 August 1967. They figured for the first time in the text of Article V of the January 1968 identical treaty drafts. They were maintained in the joint draft of 11 March 1968 in spite of the strong opposition they encountered from some members of the ENDC and more particularly by Sweden, which presented a formal amendment to Article V to eliminate any reference to bilaterals.¹⁸⁵ Bilateral agreements were finally maintained in the reformulated text of Article V in the final NPT draft commended by the UN General Assembly. The last sentence of the article reads: "Non-nuclear-weapon States Party to the Treaty so desiring may also obtain such benefits pursuant to bilateral agreements."

¹⁸⁵ DCOR, Suppl. for 1967 and 1968, Docs. 230 and Add. 1, Ann. IV, Sec. 32 (ENDC/216, 13 Feb. 1968).

Resistance to bilateral agreements emanated from a combination of worries and preoccupations. In the first place, the lack of any provision in all treaty drafts on international observation of peaceful nuclear explosions was a source of concern that bilateral arrangements could serve as a guise for clandestine nuclear co-operation for military purposes.¹⁸⁶ Secondly, discriminatory treatment was feared.¹⁸⁷ Lastly, some form of internationalisation was favoured whereby licensing by an international organ of each project would be required. This latter goal had in fact prompted Sweden to present its aforementioned amendments including the omission of any reference to bilaterals in the text of Article V.¹⁸⁸ It was feared that bilaterals might hinder rather than promote the formulation of generally acceptable procedures and the creation of suitable international instruments providing for peaceful nuclear explosions.¹⁸⁹

On the other hand, and as conceded by the representative of Canada at the ENDC, not all the States represented at the ENDC "would consider the entire ruling out of bilateral arrangements ... to be desirable."¹⁹⁰ This was also the view of some States represented in other forums.¹⁹¹

186 For example, see ENDC/PV. 358, 23 Jan. 1968, para. 62 (Canada); ENDC/PV. 367, 20 Feb. 1968, paras. 31-33 (UAR); ENDC/PV. 373, 5 Mar. 1968, para. 13 (Sweden); and A/C.1/PV. 1565 (prov.), 10 May 1968, p. 12 (Ceylon).

187 For example, see A/C.1/PV. 1567 (prov.), 14 May 1968, pp. 72-75 (India).

188 See also ENDC/PV. 373, 5 Mar. 1968, para. 15 (Sweden) and A/C.1/PV. 1624 (prov.), 28 Nov. 1968, pp. 48-50 (India).

189 See Keller, Bolliger and Kalff, loc.cit., p. 49.

190 ENDC/PV. 368, 21 Feb. 1968, para. 14.

191 One of the countries which was remarkably insistent on bilaterals is Australia. A/CONF.35/C.2/SR.14, 24 Sept. 1968, p. 157 and SR.17, 25 Sept. 1968, p. 180; A/C.1/PV. 1616 (prov.), 22 Nov. 1968, pp. 43-45; and A/C.1/PV. 1704 (prov.), 28 Nov. 1969, pp. 34-35.

Both the United States and the Soviet Union have tried to dissipate those worries and preoccupations. They argued that the use of peaceful nuclear explosions should meet the requirements of Articles I and II of the NPT including the non-transfer of peaceful nuclear explosives to any recipient whatsoever. Appropriate international procedures and observation were promised to be applicable even to bilaterals to make sure that the NPT would not be violated. Moreover, it was argued, as mentioned earlier, that the option of obtaining the benefits either bilaterally or through an international body was a positive assurance against discrimination. It was also pointed out that there would be no scarcity of devices once the technology became feasible.¹⁹²

Now that the bilateral option has been confirmed in the last sentence of Article V, it is quite correct to say, as explained by Mr. William Foster, the then Director of the US ACDA, that the last sentence "preserves the option...without the need to await multilateral agreement or action concerning the provision of...services through an international body."¹⁹³ However, it should be noticed that bilateral agreements will be subject to appropriate rules of international observation already worked out by the IAEA which will also be responsible for their application. Moreover, appropriate international procedures which will be applicable to bilaterals, as previously mentioned, have been worked out for the early stages of PNE projects within the framework of the IAEA.

It was estimated, in the American debate, that if the pattern which has been followed in the case of nuclear power plants is followed in the case of peaceful nuclear explosions, many US international arrangements are expected to be bilateral.¹⁹⁴ However, this analogy might prove to be erroneous.

192 ENDC/PV. 369, 22 Feb. 1968, paras. 37-42 (United States) and ENDC/PV. 370, 27 Feb. 1968, paras. 48-53 (USSR).

193 Hearings on NPT, 1968, p. 12.

194 Hearings on Nuclear Explosion Services, p. 75.

Present pressures for increasing the role of international organisations in the field of peaceful uses of nuclear energy, as shown in the preceding chapter, are weighing heavily with regard to peaceful nuclear explosions in particular. The technology is a new one and still unexploited by bilateral arrangements. It, therefore, offers a great opportunity for an international regime which already has its roots in Article V of the NPT.

2. The Appropriate International Body

The United States, in its principles put forward in March 1967, pointed out that "there should be a means provided for non-nuclear-weapon States wishing to do so to request nuclear explosive services from the nuclear-weapon States through an international body in which the non-nuclear-weapon States would participate."¹⁹⁵ This, however, was not reflected in the pre-ambular paragraph of the August 1967 identical treaty drafts.

The Mexican proposal of 19 September 1967 for a separate article on peaceful nuclear explosions included the provision that "assistance shall be requested and channeled through appropriate international bodies with adequate representation of non-nuclear-weapon States, subject to procedures to be established in a special agreement ..."¹⁹⁶ (Emphasis added.) This was the only channel through which peaceful nuclear explosions would have been provided. As the Mexican representative at the ENDC explained "non-nuclear-weapon States ... are quite rightly reluctant to be subject to the good will of the nuclear Powers for the performance of that service."¹⁹⁷ Mexico, in using the word "body" in the plural, had in mind the IAEA, either alone or in association with other bodies. The special agreement was

195 ENDC/PV. 259, 21 Mar. 1967, para. 74.

196 DCOR, Suppl. for 1967 and 1968, Docs. DC/230 and Add. 1, Ann. IV, Sec. 12 (ENDC/196, 19 Sept. 1967), Article IV-A, para. 2.

197 ENDC/PV. 331, 19 Sept. 1967, para. 13.

provided for to lay down the functions of the international body.¹⁹⁸

The January 1968 identical treaty drafts, besides providing for bilateral arrangements, also provided for "an appropriate international body with adequate representation of non-nuclear-weapon States", pursuant to a special international agreement or agreements. This provision was maintained in the joint draft of 11 March 1968 and, with some rephrasing, in the final treaty draft, which reads :

"Non-nuclear-weapon States Party to the Treaty shall be able to obtain such benefits, pursuant to a special international agreement or agreements, through an appropriate international body with adequate representation of non-nuclear-weapon States. Negotiations on this subject shall commence as soon¹⁹⁹ as possible after the Treaty enters into force."

The last sentence was in partial compliance with a Mexican suggestion. The urgency in the Mexican suggestion was not related to the commencement of the negotiations, as provided for in Article V, but was rather related to UN General Assembly approval of the special international agreement "which doubtless will have to contain the statute of the 'appropriate international organ' to be set up".²⁰⁰

Before turning to the identification of the "appropriate international body", some precisions should be made with regard to the "special international agreement or agreements" connected with that "body".

(a) The Special International Agreement or Agreements

At the outset of this chapter, we indicated that both the Soviet Union and the United States were in favour of a special international agreement, separate from the NPT, on the question of peaceful nuclear explosions. This was their view before the

¹⁹⁸ Ibid.

¹⁹⁹ See Appendix 3-G.

²⁰⁰ A/C.1/PV. 1569 (prov.), 16 May 1968, pp. 31-32.

submission of their identical treaty drafts of 18 January 1968, which included the first draft of Article V.²⁰¹

The first attempt to assemble the elements of such an agreement was undertaken by Canada in September 1967.²⁰² However, the idea of a separate article on peaceful nuclear explosions including the reference to a special international agreement had emanated, as previously indicated, from Mexico.

The phrase "special international agreement or agreements" in the text of Article V contemplates, as explained by the United States, "a basic agreement defining the functions of the appropriate international body and holds open the possibility of a series of separate international agreements dealing with particular projects."²⁰³ This means that the "special international agreement" would designate or create an international body, define its functions with regard to peaceful nuclear explosions and establish the procedures to be followed in obtaining their potential benefits. The "agreements" would constitute those signed between the "international body" and the interested parties for the carrying out of particular projects. Following, for example, the IAEA experience in serving as an intermediary between States for the supply of fissionable material and equipment, an agreement could be concluded between the requesting non-nuclear-weapon State, the supplier nuclear-weapon State and the IAEA, setting forth the terms and conditions for providing the service. They could also be, as suggested by Canada, similar to the project agreements normal in economic assistance relationships.²⁰⁴ The form and content of the "agreements", however, would depend on the provisions of the "special

201 See ENDC/PV. 293, 14 Mar. 1967, para. 63 (USSR) and ENDC/PV. 295, 21 Mar. 1967, para. 72 (United States).

202 ENDC/PV. 329, 12 Sept. 1967, paras. 19-22.

203 A/C.1/PV. 1577 (prov.), 31 May 1968, p. 78.

204 A/CONF.35/C.2/SR.10, 18 Sept. 1968, p. 109.

international agreement" and/or the "international body" entrusted with responsibilities in this new technological field.

Negotiations concerning the special international agreement were to start, according to Article V, "as soon as possible after the Treaty enters into force." However, preparatory considerations of this matter were not precluded before the entry into force of the NPT.²⁰⁵

At the Conference of Non-Nuclear-Weapon States, Mexico had expressed the view that one of the most useful contributions of the Conference was to draw up a preliminary draft of the "special international agreement".²⁰⁶ It had in fact submitted to the Conference a working document which had included basic proposals for the preparation of the "agreement" and preliminary draft articles for such an "agreement".²⁰⁷ Without going into the content of that document which we have occasionally referred to in relation to certain aspects treated above and which we shall later resort to with regard to the "international body", it must be said that the document was the only serious attempt to draft a "special international agreement". However, it was not possible for the Conference, which was dealing with all sorts of complicated problems, to allot enough attention to the Mexican basic proposals and draft articles.

Mexico pursued the matter further at the twenty-third session of the UN General Assembly in 1968 and was the first country to suggest the preparation of a report by the UN Secretary-General to serve as a basis for the Assembly's discussions on

205 A/C.1/PV.1577 (prov.), 31 May 1968, pp. 79-80 (United States). Yugoslavia was of the view that negotiations should commence immediately after the signature of the NPT. A/C.1/PV.1567 (prov.), 14 May 1968, p. 16.

206 A/CONF.35/SR.4, 4 Sept. 1968, p. 41.

207 Mexico, "International Programme of Nuclear Explosions".

this subject during the following session.²⁰⁸ The Mexican suggestion had developed into a draft resolution co-sponsored by twenty-four countries which had requested the UN Secretary-General to prepare, more precisely, a report on the establishment within the framework of the IAEA, of an international service for peaceful nuclear explosions.²⁰⁹

Since then, attention has mainly focused on the IAEA, and the question of a "special international agreement" has rarely been raised until the convening of the 1975 NPT Review Conference. At the Conference eight countries; Ghana, Mexico, Nigeria, Peru, Phillipines, Romania, Syria and Yugoslavia submitted a draft resolution urging the Depositary Governments of the NPT to initiate immediate consultations with all of the other States Party to the Treaty in order to reach agreement on the most appropriate place and date for holding a meeting of the Parties in order to conclude the basic special international agreement. The Depositary Governments, i.e., the three nuclear-weapon States Parties to the NPT, and their allies opposed such a proposal and insisted that the issue of a "special international agreement" should be left to the IAEA. As a result, the NPT Review Conference in its review of Article V, urged the IAEA to commence consideration of the structure and content of the special international agreement or agreements contemplated in Article V. However, at the 30th Session of the UN General Assembly, which followed the NPT Review Conference, the eight countries succeeded not only in making reference of this proposal in a resolution adopted by the Assembly on General and Complete Disarmament but also in reextending an invitation to both the United States and the Soviet Union to provide information on consultations "as they may have entered into or may intend to enter into for the conclusion of the special international agreement".²¹⁰

208 A/C.1/PV. 1630 (prov.), 5 Dec. 1968, pp. 48-51.

209 GAOR, 23 Sess., Anns. (Vol. 1), a.i. 96, Doc. A/7445, para. 7(g) (A/C.1/L.460 and Add. 1), p. 18. See also A/C.1/PV. 1640 (prov.), 13 Dec. 1968, pp. 57-63 (Mexico).

210 GA Res. 3484A (xxx), 12 Dec. 1975 in GAOR, 30th Sess., Suppl. No. 34 (A/10034), pp. 30-31. For the draft resolution sub-

Serious consultations, however, took place within the framework of the Ad Hoc Advisory Group on PNE in which representatives of 41 States including the United States and the Soviet Union discussed and submitted in its 1977 report the possible content of the agreements required under Article V of the NPT in the form of a list of some principles or matters to be considered in formulating international arrangements for providing nuclear explosions for peaceful purposes as well as the possible structure of the agreements in the form of four main alternative international legal instruments for providing PNEs in accordance with the NPT. The results of the study can be summarized as follows:²¹¹

(i) The Contents: Principles or Matters to be Considered in Formulating International Arrangements: Apart from taking full account of Article V of the NPT as well as the provisions of international treaties and agreements and other international legal instruments relevant to this question, and without prejudice to negotiations designed to achieve further limitation on nuclear-weapon test explosions or a comprehensive ban thereon, the most salient principles or matters listed by the Ad Hoc Group are:

- All States should be given the opportunity to participate, as appropriate, in any negotiation of the international arrangements. They should also have the right of access to the PNE project services provided under such arrangements, when established.

- All PNE project services should be subject to observation and governed by the "Guidelines" worked out by the IAEA.

- There should be no derogation from the sovereign right of any State to determine for itself policies and aspects which do

mitted by the eight countries at the NPT Review Conference, see Docs. NPT/CONF/C.II/L. 1, 20 May 1975 and NPT/CONF.II/C.II/L. 1/Add. 1, 26 May 1975 in Review Conference of the Parties to the NPT, Final Document, Part II, Geneva, 1975 (NPT/CONF/35/II).

²¹¹ For the complete results see, Nuclear Explosions for Peaceful Purposes, pp. 105-116.

not affect its obligations under international law (e.g., choice of technology or use of consultant States).

- The international arrangements and technical recommendations should be subject to review on the basis of their effectiveness and of health and safety experience.

- Provision will have to be made for determining responsibility for the payment of costs of any studies or assistance carried out by or on behalf of the Agency.

- The need to have access to indicative costs for nuclear explosive related services.

- Full account should be taken of the interests of non-participating third States. Consideration should also be given to defining whether there are circumstances under which the consent of a State whose territory may be affected should be required.

- Provisions relating to the settlement of disputes should be included.

- Detailed questions relating to third party liability will have to be addressed in the arrangements.

(ii) The Structure: Alternative International Legal Instruments: The Ad Hoc Advisory Group points out that in considering the alternatives it should be borne in mind that the Parties to the NPT retain the legal right to conclude, in accordance with Article V of the NPT, special international agreement or agreements for PNE project services. The alternatives discussed by the Group are:

- An international multilateral agreement ("Umbrella" Agreement) establishing binding principles and procedures, annexing a Model Project Agreement and foreseeing separate Project Agreements.

The multilateral agreement would contain comprehensive provisions covering, at the least, all the relevant principles and matters discussed above. It would also incorporate the "appropriate international procedures" mentioned in Article V of the

NPT as developed by the IAEA, would designate the IAEA as the "appropriate international body" referred to in that Article and define its role, and would additionally provide for Agency observation in accordance with the "Guidelines" worked out by the IAEA. It is also suggested that there should be annexed to the umbrella agreement a model project agreement which would assist in the negotiation of individual project agreements. Such agreements might themselves be specifically foreseen in the umbrella agreement. The Ad Hoc Advisory Group points out that this alternative would imply that it would be necessary to consider how to bring about the negotiation of the multilateral agreement. One way might be for the IAEA itself to convene a diplomatic conference. The Agency might provide the conference with a draft agreement as a basis for negotiation.

- General principles established within the IAEA.

An appropriate organ of the IAEA, in consultation with all interested Member States, could draw up a comprehensive list of general principles which should govern agreements for PNE project services. Such a list would form the basis of all PNE project agreements to which the Agency became a party. It would be submitted for approval by the Board of Governors of the IAEA and contained in a document analogous, for example, to the system of safeguards worked out with regard to the implementation of Article III of the NPT. In addition, as a further derivative of this alternative, there could be annexed to the general principles a model project agreement which could form the basis for the negotiation of any actual project agreement between the Agency and the States interested in proceeding with a project.

- Bilateral master agreements between the IAEA and individual supplier nuclear-weapon States or consultant States and separate agreements for projects taking account of Agency-developed guidelines.

Under this approach too, a basic document would have to be worked out and the contents of which would cover, at the least, all of the principles and matters set out by the Ad Hoc Advisory

Group. It is envisaged that individual supplier nuclear-weapon States would conclude bilateral master agreements with the IAEA, the provisions of which would conform to the contents of this basic document. In the master agreement the State would undertake to be bound by its provisions in all projects in which it participated involving peaceful applications of nuclear explosions in non-nuclear-weapon States in which the Agency was involved. Similar master agreements could also be concluded with consultant States, which would omit features concerned solely with the supply of nuclear explosive related services.

- Memorandum of Understanding

Under this approach, the principles which should govern PNE project services modelled upon the principles and matters set out by the Ad Hoc Advisory Group would be embodied in such a Memorandum which would operate on a good-faith basis and contemplate the creation of rights and obligations binding under international law through individual project agreements. The principles of the Memorandum would contemplate the conclusion of individual project agreements between supplier, recipient and consultant States. The Memorandum would be a flexible instrument while constituting a rather strong and formal framework. Such a Memorandum, while encouraging the uniform development of PNE project services, would not guarantee it.

The Ad Hoc Advisory Group also raised the possibility of contemplating a number of variations on the above four alternatives.

This writer's preference is the second alternative. As general opinion was settled for the IAEA as the "international body" or international organ, the "raison d'être" of a "special international agreement" seems to be doubtful for two basic reasons. Now that the IAEA has taken charge of the question of peaceful nuclear explosions, there is no need for such an agreement to designate or create an "international body". Secondly, the functions of the IAEA and the principles to govern the provision of PNE services could very well be developed and laid down

in an IAEA document similar to the document on guidelines for international observation. In this case the phrase "special international agreement" would be deprived of any meaning unless for sheer legal considerations there is a preference to strictly abide by the text of the NPT requiring such an international agreement to lay down the functions and responsibilities of the Agency, an agreement which, in our view, would be unnecessary. The IAEA has succeeded in developing each of the guidelines for international observation and the procedures for the early stages of PNE projects, as well as a new system of safeguards in relation to the implementation of Article III of the NPT. There is no reason to believe it should not succeed, with the wide participation of its Member States and a renewed IAEA Board, in delimiting more precisely its functions and procedures to make available the potential benefits of peaceful nuclear explosions without recourse to a "special international agreement". This, however, would bring us more closely to the discussion of the choice of the IAEA as the "international body".

(b) The IAEA as the "International Body"

The selection of the IAEA was contemplated long before the final formulation of the NPT. The final choice, however, did not come about without considering other alternatives and without ignoring the complementary roles that can be played by other international organisations.

The establishment of a new international organisation was contemplated by very few countries such as Brazil in 1967 and Italy in 1968.²¹² The latter country was also ready, as an alternative, to go along with Mexico's proposal for a new autonomous body to function within the framework of the IAEA.²¹³

The reasons invoked for the establishment of a new body

212 See ENDC/PV. 297, 18 May 1967, para. 49 (Brazil) and A/CONF.35/C.2/2, 9 Sept. 1968 (Italy).

213 See Mexico, "International Programme of Nuclear Explosions". Mexico had no objection to the idea of an autonomous body to function within the UN system. Ibid., p. 6.

whether as an independent body or as an autonomous one within the framework of the IAEA, are manifold. In the first place, no existing body was found to be open to all nuclear-weapon States who would wish to contribute, and which, on the other hand, was only open to non-nuclear-weapon States which have renounced nuclear weapons.²¹⁴ It should also be recalled that at that time the composition of the IAEA Board was considered unrepresentative of the increasing membership of the Agency and more particularly of the developing countries. Secondly, the IAEA was found to lack the organisation necessary to undertake such a task, since it had other priorities, and it was feared that matters relating to peaceful explosions would be neglected. Instead of overhauling the Agency from top to bottom it was considered wiser to set up a separate body. The idea of an autonomous body was based on precedents such as the autonomous institutions already existing within the OECD, e.g. the Nuclear Energy Agency (NEA).²¹⁵

Without going much deeper into the idea of an autonomous international body which had in fact prompted the adoption by the twenty-third session of the UN General Assembly of the aforementioned draft resolution sponsored by Mexico and twenty-three other States including Italy,²¹⁶ it must be said that there was a strong counter-trend against the establishment of

214 Ibid., p. 5. The People's Republic of China at that time was neither represented at the UN nor at the IAEA.

215 See A/CONF.35/C.2/SR.3, 9 Sept. 1968, pp. 17-18 (Italy). See also the reasons invoked by Dr. Ericsson of Sweden and Marvin Kalkstein, the former favouring the establishment of an international expert organisation and the latter favouring a new UN forum for initial discussions. Ericsson, "The Question of Nuclear Explosions", pp. 7-8 and Kalkstein, op.cit., pp. 35-37.

216 GA Res. 2456 C (XXIII), 20 Dec. 1968. GAOR, 23rd Sess., Suppl. No. 18 (A/7218), p. 14.

new international bodies.²¹⁷ The IAEA and other international organisations were found to be adequate and competent to undertake the different functions for the peaceful applications of nuclear explosions without the heavy burden on financial and personnel resources which would result from the creation of new international bodies.²¹⁸

Besides the IAEA, the World Health Organisation (WHO) would be quite competent to contribute in assessing the safety hazards involved in each project. In fact, the UN Secretary-General, in his 1969 report on the establishment within the framework of the IAEA of an international service, pointed out that WHO had expressed its interest in assisting in the international evaluation in connexion with the problems of radiation exposure of populations, radioactive contamination of the environment, changes in the ecology due to radiation and other related risks.²¹⁹

The United Nations Development Programme (UNDP) and the International Bank for Reconstruction and Development (IBRD) as well as regional development banks might also assume great responsibilities in financing peaceful nuclear explosion projects.²²⁰ The UNDP, in particular, is well suited for such pro-

217 See the voting results on the 24-power draft resolution. GAOR, 23rd Sess., Anns. (Vol. 1), a.i. 96, Doc. A/7445, para. 13(b). The draft was adopted by a roll-call vote of 59 to 9 with 35 abstentions. The dissensions were reflecting, inter alia, the desire to let the IAEA study the matter without need for a parallel UN study.

218 IAEA co-operation with other UN agencies was recommended by the group of experts on the contributions of nuclear technology to the economic and scientific advancement of the developing countries. Contributions of Nuclear Technology (A/7568), para. 40.

219 UN Doc. A/7678, 29 Sept. 1969, pp. 5-6.

220 For example, see A/C.1/PV. 1564 (prov.), 9 May 1968, pp. 13-15 (Sweden); A/C.1/PV. 1572, 22 May 1968, para. 44 (Netherlands); and A/CONF.35/C.2/SR.10, 18 Sept. 1968, p. 109 (Canada).

jects which, for example, in the field of developing natural resources, fall into the category of pre-investment projects entailing substantial capital investment of a long-term character.²²¹

However, the IAEA has emerged as the mother organisation in this new technological field. The IAEA has in fact seized the opportunity offered by the study requested by the UN on the establishment within its framework of an international service as well as the studies requested by its own General Conference in 1968,²²² to affirm its predominant role in this domain. In response to those requests, the IAEA Board, in its first report on this question, concluded that the performance of the functions of the international body referred to in Article V of the NPT were within the Agency's technical competence and clearly fell within the scope of its statutory functions.²²³ But before evoking the detailed functions that the IAEA could and did perform in this domain, two basic interrelated questions need to be examined, i.e. the organisational set-up and the nature of the IAEA role.

The general consensus that IAEA should bear the main responsibilities in the field of peaceful applications of nuclear explosions entailed, however, some divergencies of view with regard to its organisational set-up. As previously mentioned, Mexico and a group of Latin American countries were in favour of an autonomous body within the framework of IAEA. They entertained the idea of establishing an "International Programme for Nuclear Explosions for Peaceful Purposes."²²⁴

221 Keller, Bolliger and Kalff, loc.cit., p. 45. Nuclear explosives are likely to involve a few large blasts that must be detonated before other mining or construction activities can commence. See Brooks and Krutilla, op.cit., p. 18.

222 IAEA Doc. GC (XII)/RES/245, 30 Sept. 1968.

223 IAEA Doc. GC (XIII)/410, 31 July 1969, para. 13(b). For the Agency's position under its Statute, see Ibid., paras. 4-5.

224 See the draft resolution submitted to Committee Two of the

Another view, mainly supported also by a group of Latin American countries, entertained the idea of convening a special session of the General Conference of IAEA for the purpose of considering the establishment, within the IAEA, of a department for the peaceful application of nuclear explosions, to be provided for in a Protocol to the Statute of the Agency.²²⁵

However, the two Latin American groups joined together in sponsoring a draft resolution submitted to the Conference of Non-Nuclear-Weapon States in view of establishing within the framework of the IAEA an "International Department for Nuclear Explosions for Peaceful Purposes".²²⁶ The draft, which was approved by Committee Two of the Conference, failed, however, to obtain the required two-thirds majority in the Plenary.²²⁷ Those who opposed the resolution had mainly considered premature the decision to establish such a department before any progress had been achieved in the actual application of peaceful nuclear explosions.²²⁸

The IAEA's Board, in its first report in 1969 on its responsibility to provide services in this field, reached the following conclusion :

"At this stage the tasks of the Agency in relation to peaceful nuclear explosions can be carried out by the Department of Technical Operations of the Secretariat."²²⁹

Conference of Non-Nuclear-Weapon States by Mexico and eight other Latin American countries. A/CONF.35/C.2/L.12, 20 Sept. 1968. For the detailed organisational aspect of such a "Programme", see Mexico, "International Programme of Nuclear Explosions".

225 See the draft resolution submitted to Committee Two of the Conference of Non-Nuclear-Weapon States by Argentina, Brazil and Peru. A/CONF.35/C.2/L.9, 20 Sept. 1968.

226 A/CONF.35/C.2/L.13, 20 Sept. 1968 and Corr. 1, 21 Sept. 1968.

227 See the results of voting in A/CONF.35/C.2/SR.16, 25 Sept. 1968, pp. 173-174 and A/CONF.35/SR.17, 26 Sept. 1968, p. 211.

228 For example, see A/CONF.35/C.2/SR.14, 24 Sept. 1968, pp. 156-157 (Hungary and UAR) and A/CONF.35/C.2/SR.17, 25 Sept. 1968, p. 182 (Switzerland).

229 IAEA Doc. GC (XIII)/410, 31 July 1969, para. 13(d).

A few years later and in compliance with a resolution of the IAEA Board of Governors on 13 September 1974, a unit was established in January 1975 in the IAEA Department of Technical Operations to deal with the technological, economic, safety and legal aspects of the use of PNE. The unit is responsible for collecting and exchanging all relevant information, for taking action on the requests for services related to the use of PNE and for surveying the economics of this and alternative technologies.

In its review of Article V of the NPT, the 1975 NPT Review Conference considered the IAEA to be the appropriate international body, referred to in Article V of the NPT. It urged the IAEA to set up appropriate machinery within which inter-governmental discussion can take place and through which advice can be given on the Agency's work in the field of PNEs.

In fact, a few months before the NPT Review Conference convened, the IAEA Board of Governors at its February 1975 session discussed the possibility of establishing a special committee for PNE. On 11 June 1975, a few days after the Conference wound up its review, the Board established the intergovernmental Ad Hoc Advisory Group on PNEs, which we have so far reviewed its basic results and recommendations.

Between September 1975 and August 1977 the Ad Hoc Advisory Group composed of 41 States held five sessions. The Group also made arrangements whereby States Party to the NPT but not members of the IAEA, which would wish to do so, could participate in its work.

Noting that the IAEA has established a PNE unit within its Secretariat and has adopted the procedures for the Agency to use in responding to requests for early phases of PNE project services, the Ad Hoc Advisory Group has interpreted its mandate as being to advise the IAEA Board of Governors on the factors involved in extending the Agency's role in arrangements for the provision of PNE project services to include also later project stages such as project definition, project execution, past-

project evaluation and project termination phases of projects carried out under Agency observation and procedures.

On 23 September 1977, the IAEA Board of Governors having examined the report of the Ad Hoc Advisory Group, decided to keep the subject matter of the report under review and to continue consideration of the matter when appropriate. It also decided that the services of the Ad Hoc Advisory Group should continue to be available as required.²³⁰

The second question concerns the nature of the IAEA role in this domain. Is the role going to be merely an administrative one or also regulatory ? The general trend, as can be deduced from the 1969 UN Secretary-General's report on the establishment within the framework of the IAEA of an international service and the discussions thereupon, is in favour of an intermediary role for the IAEA.²³¹ On the other hand, it is to be noticed that Sweden, which had played a leading role in requesting that any peaceful applications of nuclear explosions should be subject to international licensing by an international body, was not of the opinion that IAEA should carry the responsibility for the crucial "go ahead" decision. In its view, some more central UN body, or a body explicitly representative of the parties to relevant treaties, should be charged with that responsibility.²³²

The IAEA Board of Governors, in its aforementioned 1969 report, while not taking a definite stand on this question,

230 See Review Conference of the Parties to the NPT, IAEA Activities Under Article V of NPT. Analytical and Technical Report (NPT/CONF/12, 17 Feb. 1975), p. 8 and Preparatory Committee for the Second Review Conference of the Parties to the NPT, IAEA Activities Under Article V of NPT (NPT/CONF.II/PC.II/9, 25 July 1979), pp. 4-5 and Ann. H, espec. p. 103.

231 See UN Doc. A/7678, 29 Sept. 1969 and Add. 1, 30 Oct. 1969. Some countries argued that IAEA should regulate all nuclear explosions. See Ibid., para. 13.

232 Ibid., p. 33.

expressed the view that "(i)n the light of the experimental status of the technology, the Agency should approach this subject on an evolutionary basis, devoting its attention initially to the exchange and dissemination of information."²³³ It is this latter function that was singled out by the Conference of Non-Nuclear-Weapon States in its Resolution H.²³⁴ The nature of the IAEA role, however, has evolved greatly since this Conference, as it can clearly be ascertained from the analysis undertaken so far under this Chapter, but as it appears it will basically be an intermediary role. Nevertheless, IAEA could exert great influence on decisions that will have to be made by States embarking on a PNE project. The Agency's involvement in arrangements for the provision of PNE project services would be crucial in bringing about a fruitful outcome.

Apart from the detailed functions envisaged and carried out by the IAEA, which have been discussed here so far, it remains for us to tackle some remaining aspects of the role of IAEA in the field of exchange and dissemination of scientific and technical information pertaining to PNEs. The first panel of experts to study the phenomenology and applications of PNEs, which was held in Vienna in 1970, recommended the early preparation of an introductory review of PNEs' technology and the publication of a multilingual glossary of terms.²³⁵ The glossary in four languages (English, French, Russian and Spanish) was completed and published in 1979.²³⁶ The IAEA also published in 1970 a bibliography on PNEs containing 1759 references to literature published up to June 1969.²³⁷ Work on updating and revising the PNE bibliography has been continued and the revised bibliography

233 IAEA Doc. GC (XIII)/410, 31 July 1969, para. 13(c).

234 Final Document of the Conference of Non-Nuclear-Weapon States (A/CONF.35/10, 1 Oct. 1968), Resolution H (I), p. 14.

235 See IAEA Doc. GC (XIV)/INF/121, 25 Aug. 1970, paras. 19-20.

236 Doc. NPT/CONF.II/PC.II/9, 25 July 1979, p. 7.

237 Peaceful Uses of Nuclear Explosions (Vienna: IAEA, 1970) (Bibliographical Series, No. 38).

is to be published in 1980.²³⁸ Moreover, at the fifth technical panel held in Vienna in 1976, it was felt that it would be appropriate for the IAEA to continue to provide this forum for technical meetings about the development of techniques for using PNEs, as sufficient new information became available. A sixth technical panel was scheduled for 1979.²³⁹

The role of the IAEA continues to be the subject of reviews by its own organs as well as by the UN General Assembly on the occasion of its annual consideration of IAEA annual reports, and more particularly since the 27th session of the Assembly when the item on peaceful nuclear explosions ceased to figure on its agenda. In that session, the role of IAEA was also considered for the last time in connexion with the item related to the "Implementation of the Results of the Conference of Non-Nuclear-Weapon States", which did not figure on the agenda of the 28th session of the Assembly. With the disappearance of the latter two items, the IAEA emerges as an unchallenged organisation not only with respect to peaceful nuclear explosions but also with respect to the other questions pertaining to its competence and treated by the Conference of Non-Nuclear-Weapon States, namely the peaceful uses of nuclear energy and nuclear safeguards. The symbolic consideration of IAEA reports by the UN General Assembly should not, in principle, detract from its confirmed and growing authority.

The confirmation by the 1975 NPT Review Conference of the IAEA as the "international body", through which potential benefits from peaceful applications of nuclear explosions could be made available, has enhanced the prestige and the central role of the IAEA in this domain, which so far remains unchallenged.

* * * * *

238 Doc. NPT/CONF.II/PC.II/9, 25 July 1979, p. 7.

239 Ibid., p. 6.

To sum up, the technology of peaceful nuclear explosions is still in the research and development stage. Although some limited progress has been achieved in the field of actual application, no large scale applications are expected to materialise for some years to come. In fact, such large-scale projects may even be considered altogether unacceptable in view of the feasibility problems they present. However, efforts in this domain seem not to be futile and the enormous difficulties encountered should not, in principle, lessen the determination to pursue these efforts more vigorously. In any new human venture, initial efforts are usually painful and sometimes fraught with considerable risks. Human ingenuity in face of pressing needs has rarely failed to find the proper solutions for more complicated problems. The results would be of significant importance to both nuclear and non-nuclear-weapon States. In an era of energy crisis, contained nuclear explosions offer the possibility not only of increasing fossil fuel production but also of releasing new energy sources. Cratering explosions, on the other hand, provide for example an opportunity for many developing countries with vast arid areas to increase their water resources. One can even envisage that applications entailing minor ecological risks could be carried out, for energy needs may become so great that some risks will be tolerated by both governments and public opinion.

The introduction of the question of peaceful nuclear explosions within the framework of the NPT to the benefit of non-nuclear-weapon States is another manifestation of the attempt to realise an acceptable balance of mutual responsibilities and obligations of the nuclear and non-nuclear-weapon States. The remarkable fact is that by virtue of Article V certain basic rules of conduct have been formulated before any actual peaceful applications of nuclear explosions are known to be imminent on an international level. Moreover, efforts to translate some of those rules into detailed guidelines or definite choices for

eventual implementation of Article V were prompt and serious such as the case of international observation and the choice of the IAEA as the international body. Some other rules, however, will in all probability remain a dead letter until the technology becomes a feasible one. On the other hand, the choice of the IAEA and the working out of international procedures similar to those worked out for international observation may leave little room for a special international agreement to be concluded.

The potential benefits of peaceful nuclear explosions should be made available without discrimination and at the lowest possible charge to all those who have renounced the production and acquisition of nuclear explosive devices. International observation should be equally applicable to nuclear and non-nuclear-weapon States. This would guarantee that peaceful nuclear explosions are carried out according to their declared purposes especially under a comprehensive test ban on nuclear weapons. The achievement of a comprehensive ban whereby peaceful nuclear explosions are permitted as exceptions would be a necessary pre-requisite for an orderly enjoyment of such explosions.

The choice of the IAEA as a basic channel of supply was without serious challenge. Its organisational set-up and the nature of its role in this domain can only be finally settled in the light of future experience.

Bilateral arrangements as a channel of supply should be kept to a minimum in order to facilitate the establishment of a truly international regime.

To conclude, the obligation to make available the potential benefits of peaceful nuclear explosions is being seriously taken up by non-nuclear-weapon States. For many States, this obligation is a quid pro quo for their renunciation of all nuclear explosive devices. However, in view of the enormous difficulties involved in the technology of peaceful nuclear explosions, a technology unattainable by most countries apart from the two

nuclear super-Powers, the obligation in Article V appears to be a great success for the non-nuclear-weapon States which, by renouncing all nuclear explosive devices, are not really sacrificing an important potential within their grasp.

The 1975 NPT Review Conference was an opportunity for non-nuclear-weapon States to examine more closely the progress achieved in this domain and to judge for themselves if there were any signs of neglect on the part of nuclear-weapon States in this respect. An eventual nuclear-weapon States' disinterest in peaceful nuclear explosions might have serious repercussions and might affect an orderly adherence to the NPT.

The balance of obligations and responsibilities is not only sought in the field of the peaceful uses of nuclear energy so far examined but is also sought in the field of security whether through guarantees of nuclear protection against nuclear attacks or threats or through disarmament and more particularly nuclear disarmament. In the following two chapters we turn towards those two aspects of security : nuclear guarantees and disarmament.

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